1 May, 2003
(864) 458-0379
jim.fannin@us.michelin.com

VIA FEDERAL EXPRESS
Mr. Rafael A. Casanova, Remedial Project Manager
U.S. Environmental Protection Agency, Region VI
Superfund Division (6SF-AP)
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Re: *Star Lake Canal Superfund Site, Port Neches, Texas*

Dear Mr. Casanova:

This letter and its attachments are Michelin North America, Inc.'s ("Michelin") response to your agency's Request for Information Pursuant to Section 104(e) of CERCLA (hereinafter "the Request") for the above-captioned Site. While Michelin did not receive a request directly from your agency, we are responding on behalf of the Goodrich Corporation ("Goodrich") for its former ownership of a portion of the Port Neches, Texas synthetic rubber manufacturing facility. Michelin is successor-in-interest to certain tire liabilities of the BFGoodrich Tire Company, as will be more completely explained below. Michelin is also responding for a predecessor-in-interest at the Port Neches synthetic rubber complex, the Uniroyal Goodrich Tire Company ("UGTC"), as detailed below. We note your agency attempted to contact UGTC; however, Michelin does not have a location at 280 Park Avenue in New York City and Capitol Commerce Reporter, Inc. has never been retained by nor does it have authorization to accept service on behalf of UGTC or Michelin. Finally, please note that Michelin has not owned or operated the Ameripol Synpol facility since December 17, 1992, so Michelin's answers will only address operations up to that date.

Michelin appreciates the extension of time in which to respond to your agency's Request. In addition to the undersigned, the following persons assisted in the preparation of this Response: Beth M. Ellis (Michelin Legal Assistant) and Llewellyn Levi (retired employee and consultant). Responses to the requests are provided on information and belief, based in many cases in large part on historical records and individual recollection. Michelin reserves the right to supplement or correct the information provided, should further inquiry or subsequent events so warrant.

GENERAL OBJECTIONS

1. Michelin objects to the Request on the grounds and to the extent that the Request seeks to impose upon Michelin obligations relating to the identification and disclosure of confidential information, including information that is protected under the doctrines of attorney work product and attorney-client privilege, that are different from, other than, or in addition to, those obligations set forth in 40 C.F.R., Part 2 and CERCLA Section 104(e)(7).

2. Michelin objects to the Request on the grounds that it implies or infers responsibility with respect to hazardous substances that is different from or broader than that imposed by Section 107 of CERCLA, 42 U.S.C. §9607.

Michelin North America, Inc.

One Parkway South
P.O. Box 19001
Greenville, South Carolina 29602-9001
Tel: 864/458-5000

3. Michelin objects to the Request on the grounds and to the extent that it seeks to impose upon Michelin obligations relating to the investigation for, disclosure of, and representations concerning any information responsive to the Request that are different from, other than, or in addition to Section 104 of CERCLA, 42 U.S.C. §9604.

Without waiving the foregoing objections, below are Michelin's answers to your agency's Request for Information.

PART A RESPONSES (Facility):

Questions 1 and 2. Ownership: Michelin is a New York corporation, with a principal place of business at One Parkway South, Greenville, South Carolina and is a wholly-owned subsidiary of Michelin Corporation, which is also a New York corporation. Michelin is an indirect subsidiary of Compagnie Générale des Etablissements Michelin, a French company that heads up the Michelin Groupe. A copy of the 2001 Annual for the Michelin Group is attached. It includes a list of affiliates. The 2002 Annual Report has not been distributed yet, but will be available online at: http://www.michelin.com/corporate/en/documentation/documentation.jsp. As noted above, Michelin sold the Ameripol Synpol facility (the "Rubber Plants") in December 1992 to the Gantrade Corporation, which has operated the facility as Ameripol Synpol Corporation ("ASC") since that time. Prior corporate history is as follows:

- World War II: the U.S. Government built two styrene-butadiene rubber ("SBR") manufacturing facilities in Port Neches, Texas. On behalf of the government, Firestone operated the "North Plant" from 1943 until 1947 and the B.F. Goodrich Company ("BFG") operated the "South Plant" from 1943 until 1955.
- 1947 - 1950: Firestone ceased its operations at the North Plant in 1947 and the plant remained idle.
- 1950: the U.S. Rubber Company (also known in later years as Uniroyal, Inc.) reactivated the North Plant.
- 1954 - 1955: U.S. Rubber entered into a joint venture with Texaco, Inc. in late 1954, with 50% ownership by each party, to acquire the North Plant. The joint venture was called Texas-U.S. Chemical Company ("Texas-US"). Operations commenced under Texas-US on April 29, 1955.
- 1955 - 1980: in addition to the North Plant acquisition, Texas-US also purchased a 50% ownership in the adjacent butadiene plant (also known as "Neches Butane") from the government. The remaining 50% portion of Neches Butane was purchased from the government by a joint venture between BFG and Gulf Oil Corporation, known as Goodrich-Gulf Chemicals, Inc. ("GGCI").
- 1955 - 1969: GGCI operated the South Plant. In 1969, BFG bought out Gulf's interests in both the South Plant and the portion of Neches Butane operated by GGCI and operated both under the Ameripol, Inc. name.
- 1969 - 1980: BFG continued to operate the South Plant and its portion of Neches Butane. In 1980, it sold its half interest in Neches Butane to Texaco, Inc.
- 1980: As of August 1, Uniroyal "traded" its ownership portion of Neches Butane for Texaco's portion of the North plant. The resulting North Plant operations, Synpol Inc., became a wholly owned subsidiary of Uniroyal.
- 1983: BFG transferred the responsibility of the South Plant from the "B.F. Goodrich Chemical Company" to the "B.F. Goodrich Tire Group." The South Plant became known as the Ameripol SBR Division.
- 1986: Uniroyal transferred Synpol, Inc. from its Chemical Division to its Tire Company and then "spun off" its Tire Company. BFG spun off its B.F. Goodrich Tire

Group and these two tire-manufacturing entities merged to form the Uniroyal Goodrich Tire Company ("UGTC"). By August 1, 1986, the merger of Ameripol (South Plant) and Synpol (North Plant) was completed and the physical divider between the two facilities was removed.

- 1990: An affiliate of Michelin completed its acquisition of UGTC.
- 1992: UGTC's divestiture of the Rubber Plants was completed as of December 17.

Question 3. Corporate Documentation: As indicated above, the ownership history of the Rubber Plants and Neches Butane is rather complex. Due to the volume and number of transactional documents responsive to this Request, Michelin will provide copies of the documents to your agency upon request. Additionally, it is our understanding, as Counsel for ASC provided Michelin with courtesy copies of its responses, that documentation for several of the transactions was produced to your agency by ASC in those responses.

Question 4. Facility Information: Below is a list of responsive drawings included herein, in the order in which they are enclosed. Michelin has not located any aerial photographs. Additional facility information concerning operations at Neches Butane or the Rubber Plants would been maintained at each facility. Information pertaining to Neches Butane's operations would have been transferred to Texaco in 1980, when BFG and Uniroyal divested their respective interests in that facility and Michelin would have never had possession of such information. With respect to the Rubber Plants, Michelin has not owned or operated the facility since 1992 and such documentation would no longer be in our possession or control.

Drawing No./Description:	*Date:*
E-9400 (Acreage Map)	06/06/1955
136-B-2 (Piping & Utilities)	06/07/1980
G-2738 (Plot Plan)	09/23/1980
F-3142-001 B (Plant Map)	11/14/1986
F-3142-001 C (Plant Map)	11/14/1986
F-3142-001 D (Plant Map-Hazardous Areas)	06/12/1987
8826-1 0	05/20/1988
8826-3 1	05/20/1988
8826-2 1	05/20/1988
8826-5 1	05/20/1988
1758D001	11/10/1992
1758D002	11/11/1992
1758D003	11/18/1992
1758D005	11/18/1992
E-1883-2C (Proposed Cell Arrangement/Landfill)	11/14/1988
Sheet 10 (Final Plat)	09/22/1980
Sheet 11 (Final Plat)	10/27/1980
Sheet 12 (Final Plat)	09/24/1980

Question 5. Solid Waste Management: An onsite landfill was started at the Port Neches complex in 1969 on land owned jointly by Texas-US and BFG. The operation's acreage was increased in 1980. The landfill's location is noted on several of the drawings enclosed, particularly on Drawing No. E-1883-2C ("Proposed Cell Arrangement, Common Landfill Area"). Wastes from Texaco's Neches Butane operations and the Rubber Plants were disposed of at this landfill. Michelin's records indicate that the Texas Water Commission issued a landfill permit and a reference to said permit is included herein on a listing of permits in effect as of December 17, 1992. Waste streams from the Rubber Plants handled at the landfill from 1969

until 1992 included paper, pallets, process plant sludge and solids from the two facility settling ponds, off-spec rubber, and old catalyst. Michelin does not have any knowledge or information regarding disposal subsequent to December 1992. Prior to 1969, plant wastes were transported offsite to the Bailey and Sara Jane Road Sites. Michelin assumed PRP responsibility for UGTC at the Bailey Site, which is currently in the O&M phase under the auspices of your agency. BFG and Texas-US apparently participated in a state-supervised closure of the Sara Jane Road Site in the early 1980s, along with American Cyanamid. EPA's 1991 Multimedia Audit Report is enclosed herein as a reference and is responsive to this request.

Question 6. Compliance History: Leaks, Spills, Releases: In response to this question, Michelin references the EPA 1991 Multimedia Audit Report and the Texas Air Control Board's 1990 Order No. 90-09, which are enclosed herein. Except for the enclosed reports, Michelin has not located any other evidence or information indicating that any leaks, spills or releases of any substances, including hazardous substances, occurred at or from the Rubber Plants.

Question 7. Permits: Michelin is no longer in possession of the permits related to the Rubber Plants, as they were transferred to ASC in the 1992 Asset Purchase and would be maintained at the facility. Michelin does have a listing of the permits in effect as of 1992 and a copy of said list is enclosed herein.

Questions 8 and 9. Groundwater/Surface Water Contamination: Other than the documentation enclosed herein, Michelin has not located any other evidence or information responsive to this request.

Question 10. Site Investigations: In response to this request, Michelin references a number of sampling analyses performed in 1989 by Engineering Science and Savannah Laboratories enclosed herein. EPA's 1991 Multimedia Audit Report is also considered to be responsive to this request. Except for this data, Michelin has not contemplated or performed any investigations of the groundwater, surface water or soil at the facility, as it has not owned or operated the Rubber Plants since 1992.

Question 11. Availability of Information: As indicated in prior answers, Michelin has not owned or operated the Rubber Plants since 1992; accordingly, much of the information sought by your agency would be in the possession of the current owners. Information responsive to this Request has been included herein and Michelin again reserves its right to supplement its response should additional relevant information be located.

PART B RESPONSES (Canal):

Questions 1 and 2. Ownership/Operations of Star Lake Canal: Based on information in Michelin's possession, it is our understanding that the Canal was acquired by GGCI in April 1955 from the Rubber Producing Facilities Disposal Commission. As explained above, Michelin's predecessor-in-interest, BFG sold its ownership portion of the Neches Butane facility in 1980 to Texaco (as Texaco Butadiene Company); this sale also included the conveyance of BFG's portion of the Canal. For your reference, a copy of the General Warranty Deed, dated December 29, 1980 is enclosed herein. A similar arrangement was made in the 1980 arrangement between Uniroyal and Texaco, whereby Texaco received Uniroyal's ownership portion of Neches Butane in exchange for Texaco's ownership portion of the North Plant. Three of the enclosed blueprints prepared for Texas-US in 1980 show the Canal and its easements

(Sheets 10 through 12); Michelin has not located any other documentation concerning any Texas-US ownership or any of the entities' operation of the Canal.

Question 3. Solid Waste Unit Releases/Hydraulic Connections: As noted on the blueprint identified as "Sheet 11" enclosed herein, the solid waste landfill owned and operated by the Rubber Plants and Texaco was adjacent to the Canal. Additional details on the landfill and its proximity to the Canal are noted on the blueprint entitled "Proposed Cell Arrangement: Common Landfill Area." Additionally, Michelin references the EPA's 1991 Multimedia Audit Report, enclosed herein. Except for the enclosed information, Michelin has not located any other evidence or information concerning the quantities and types of materials handled, construction, closure activities or corrective actions during the time in which its predecessors-in-interest had ownership responsibilities for the Canal.

Question 4. Compliance History: Leaks, Spills, Releases: Michelin has not located any evidence or information concerning leaks, spills or releases of any substances, including hazardous substances, during the time in which its predecessors-in-interest had ownership responsibilities for the Canal.

Questions 5, 6 and 7. Permits: Since Michelin never had ownership responsibility for the Canal, it does not have any environmental or dredging permits for the Canal, nor does it have any environmental reports concerning the Canal.

Question 8. Sampling: Since Michelin never had ownership responsibility for the Canal, it has not performed or contemplated performing any sampling of the sediments in or around the Canal.

Question 10. Site Investigations: Since Michelin never had ownership responsibilities for the Canal, it has not contemplated performing or performed any investigations of the groundwater, surface water or soil on or around the Canal.

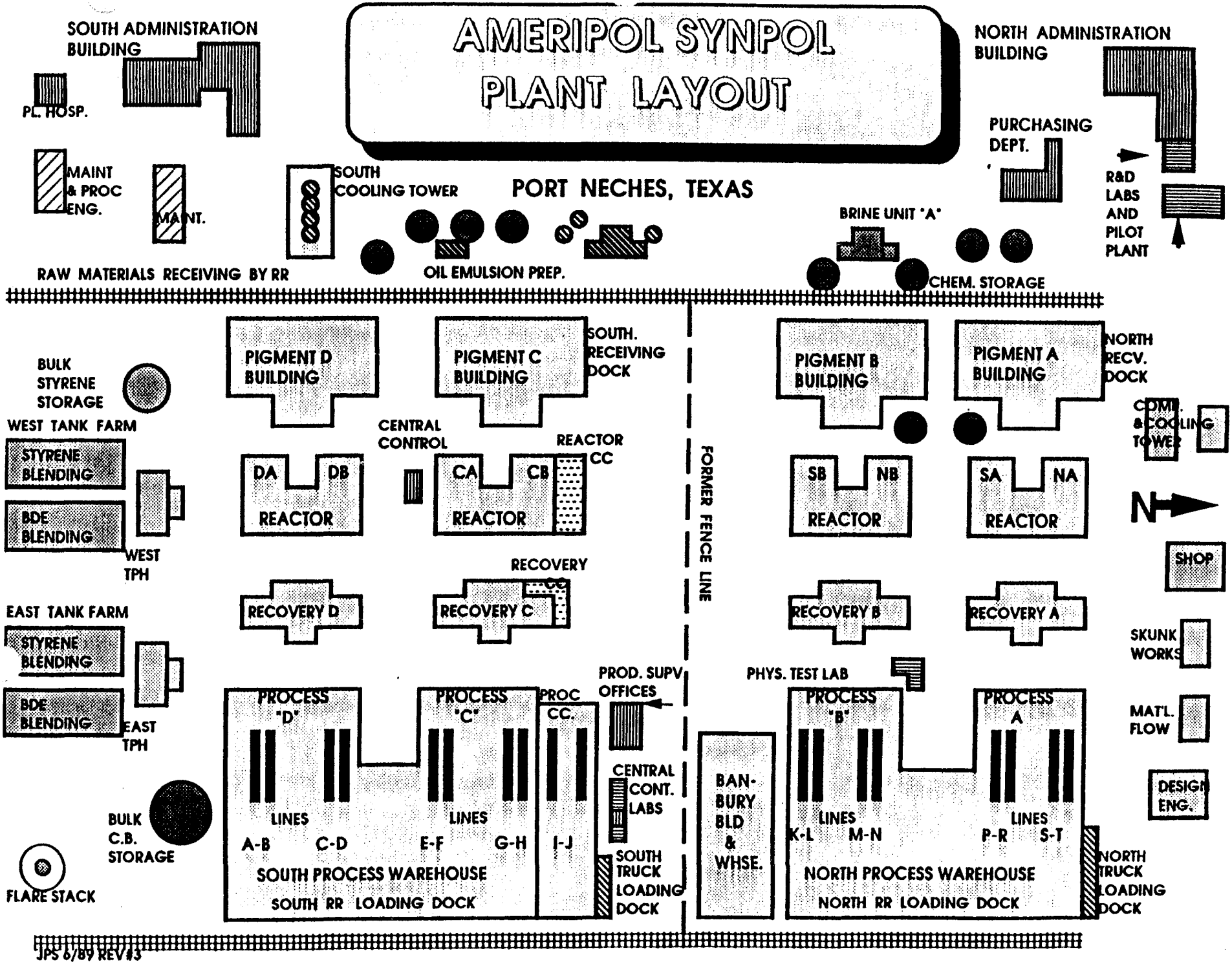
Michelin asks that future correspondence regarding the Site be directed to the undersigned at: 1401 Antioch Church Road, Greenville, SC 29605, as well as Ms. Beth M. Ellis, Legal Assistant, Michelin North America, Inc., One Parkway South, Greenville, SC 29615. She may be reached at (864) 458-5640 or via email at beth.ellis@us.michelin.com.

Sincerely yours,
MICHELIN NORTH AMERICA, INC.

James D. Fannin
Environmental Engineer

Enclosures

DOCUMENTS RESPONSIVE TO MULTIPLE QUESTIONS


AMERIPOL SYNPOL
PLANT LAYOUT
PORT NECHES, TEXAS
SOUTH ADMINISTRATION BUILDING
PL. HOSP.
MAINT & PROC ENG.
MAINT.
SOUTH COOLING TOWER
RAW MATERIALS RECEIVING BY RR
OIL EMULSION PREP.
NORTH ADMINISTRATION BUILDING
PURCHASING DEPT.
R&D LABS AND PILOT PLANT
BRINE UNIT "A"
CHEM. STORAGE
BULK STYRENE STORAGE
WEST TANK FARM
STYRENE BLENDING
BDE BLENDING
WEST TPH
EAST TANK FARM
STYRENE BLENDING
BDE BLENDING
EAST TPH
BULK C.B. STORAGE
FLARE STACK
PIGMENT D BUILDING
PIGMENT C BUILDING
SOUTH. RECEIVING DOCK
CENTRAL CONTROL
REACTOR CC
DA DB REACTOR
CA CB REACTOR
RECOVERY
RECOVERY D
RECOVERY C
PIGMENT B BUILDING
PIGMENT A BUILDING
NORTH RECV. DOCK
COMM. & COOLING TOWER
SB NB REACTOR
SA NA REACTOR
N
SHOP
RECOVERY B
RECOVERY A
SKUNK WORKS
MAT'L. FLOW
DESIGN ENG.
FORMER FENCE LINE
PROD. SUPV OFFICES
PHYS. TEST LAB
PROCESS "D"
PROCESS "C"
PROC CC.
PROCESS "B"
PROCESS A
LINES A-B C-D E-F G-H I-J
SOUTH PROCESS WAREHOUSE
SOUTH RR LOADING DOCK
CENTRAL CONT. LABS
SOUTH TRUCK LOADING DOCK
BAN-BURY BLD & WHSE.
LINES K-L M-N P-R S-T
NORTH PROCESS WAREHOUSE
NORTH RR LOADING DOCK
NORTH TRUCK LOADING DOCK
JPS 6/89 REV#3

UNITED STATE ENVIRONMENTAL PROTECTION AGENCY
SURVEILLANCE BRANCH
REGION 6 DALLAS, TEXAS

TOXIC RELEASE REDUCTION PROJECT
AMERIPOL SYNPOL COMPANY- PORT NECHES, TEXAS
PHASE B MULTIMEDIA INSPECTION
JANUARY 14-18, 1991

EXECUTIVE SUMMARY

TOXIC RELEASE REDUCTION PROJECT (TRRP)
AIR TOXIC EXPOSURE AND RISK INFORMATION SYSTEM (ATERIS)
MULTIMEDIA INSPECTION
AMERIPOL SYNPOL COMPANY - PORT NECHES TEXAS

This report is prepared as part of the Regional Enforcement Pilot Project that focuses obtaining reductions in risk due to toxic chemicals emitted from industrial sources in Region 6. The purpose of this report is to gather information to better define toxic emissions at Ameripol Synpol and to insure facility compliance through multimedia inspections. The term multimedia includes at a minimum the Regional air, water, hazardous waste, toxic substances, wetlands, groundwater, superfund, underground injection, groundwater, underground storage tank and pesticides programs.

A compilation of reports was generated from a multimedia investigation in support of the TRRP at Ameripol Synpol Company (ASC) performed on December 10-14, 1990 and January 14- 18, 1991. This multimedia investigation was conducted in two phases (Phase A was conducted during December 1990 and Phase B January 1991). This report will follow the following format: 1) Introduction, 2) Summary of Apparent Violations, 3) Technical Reports, including attachments, and 4) an Addendum to the report containing laboratory analyses with conclusions based on data interpretation and the effect on the facility compliance. This addendum will also include photographs.

Each of the individual program specific inspection reports are attached separately in the Technical Reports document. The majority of the inspection reports address the specific program media and facility units in which it was investigated under. However, there are a few reports that address the complex as a whole. This approach is necessary due to the regulatory status of the facility. The information in this report was compiled by Charles Faultry, Inspection Team Leader, 6E-SC.

INTRODUCTION

Description of Project/Investigation

The TRRP Multimedia Investigation is part of a Regional Pilot Project requested by EPA's Deputy Administrator Habicht on December 15, 1989. The focus of the project takes a dual approach for reduction of toxic emissions. The first approach will initiate a review of selected sources identified in the recently released Headquarters (HQ) Air Toxics Exposure and Risk Information System (ATERIS) list of January 2, 1990, also referred to as the "Waxman" list, to explore (1) the possibility of reducing toxic emissions, (2) insuring compliance with all regulatory provisions and (3) conducting a complete multimedia risk assessment. The second approach involves a multimedia compliance investigation and subsequent multimedia risk assessment of selected facilities in the target areas to explore the potential for risk reduction. Personnel from all Divisions within the Regional Office and State Agency will be participating in this project. ASC was one the five targeted facilities that were identified in the HQ ATERIS list of January 2, 1990.

The inspection at the ASC in Port Neches, Texas was second in a series of unannounced multimedia inspections at selected facilities in the South Texas Industrial area. The multimedia compliance investigation for ASC was performed in two phases (Phase A and B). Phase A included compliance inspections for Clean Air Act (CAA), Clean Water Act (CWA), and Resource Conservation and Recovery Act (RCRA) plus sampling efforts from the CWA team. Also, several wastewater samples were taken to determine if the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation for Benzene Waste Operations were applicable. Phase B consisted of compliance inspections for Toxic Substances Control Act (TSCA), Emergency Planning and Community Right-to-Know Act (EPCRA), Underground Storage Tank (UST), Spill Prevention Control and Countermeasure (SPCC), and Wetland designated representatives. The CAA and RCRA sampling efforts were conducted during phase plus additional sampling efforts from the CWA team for stormwater runoff discharges from unpermitted waste streams. The Phase A multimedia inspections was performed December 10-14, 1990 and the Phase B January 14-18, 1991 (see attached schedules)

Most program elements were assigned team members from EPA, including an inspector and a compliance officer, and a State inspector. Two different state agencies were involved. The Texas Air Control Board (TACB) assisted in conducting the Air inspection and Texas Water Commission (TWC) was involved in the RCRA, CWA, and UST inspections. The United States Army Corp of Engineers was involved in the Wetlands inspection. The remaining programs in TSCA, EPCRA, and SPCC are not state authorized, and therefore were conducted by EPA only.

SUMMARY OF FINDINGS

UNDERGROUND STORAGE TANKS- AMERIPOL SYNPOL CO.

Inspection Date: January 16, 1991

EPA Inspector: John Cernero, P.E.

Ameripol Synpol
Representatives: Paul Aguillard (Ameripol Synpol Co.)
James Fannin (Uniroyal Goodrich Tire Company)

SUMMARY OF APPARENT VIOLATION OUTLINE

I. Summaries of Significant Findings

40 CFR 280.74 Closure Records

According to this regulation, owners and operators must maintain records that are capable of demonstrating compliance with closure requirements under Subpart G. The results of site assessments for closed USTs, as required in 40 CFR 280.72, must be maintained for at least 3 years after closure. ASC maintained only the sampling results as presented in the Southwestern Reports. No record of closure procedures or TWC's concurrence on the closures was found in the files. **This is a violation of the UST regulations.**

40 CFR 280.72(b) Assessing the Site at Closure or Change-in-Service

This regulation states that when conducting UST closure procedures, if contamination is discovered through a site assessment or any other manner, owners and operators must begin corrective action in accordance with Subpart F (40 CFR 280.60 to 280.67).

Sampling information in the Southwestern Reports indicate high levels of benzene, toluene, ethyl benzene and xylene (BTEX) at Site 2, which is north of the Technical Building and Lab (2,000 gal. gasoline UST); high levels of total petroleum hydrocarbons (TPH) at Site 3, which is located east of the Boiler House (5,300 gal. fuel oil UST); and high levels of BTEX at Site 5, which is south of the South Machine Building (4,000 gal. gasoline UST). The USTs at these locations have been closed-in-place.

According to ASC records, in their letter dated October 6, 1988, ASC provided notification to TWC of their intent to "permanently remove" six USTs. This was requested under Texas Administrative Code, since the Federal UST regulation did not become effective

until December 22, 1988. According to the letter, all six USTs would be emptied and filled with inert material, and work would be scheduled to begin on November 7, 1988. However, the sampling for the site assessment was not completed until February 15, 1989, according to the Southwestern Reports, and the actual closure of the USTs was not completed until June 30, 1989, as indicated in ASC's letter dated January 29, 1990.

ASC has stated that TWC gave them verbal approval to proceed with the closure of the USTs without requiring ASC to remove any contaminated soils; however, no documentation could be found. The only written approval ASC has received from TWC concerning UST closure, was in a letter dated April 12, 1989, in which TWC provided ASC Texas waste code numbers for "disposal of gasoline and diesel". This was in response to ASC's letter dated March 21, 1989, in which ASC requested waste code numbers for disposal of residual/unused gasoline and residual/unused diesel from UST closure.

As a result of a previous EPA (NEIC) audit, ASC, by their letter of January 29, 1990, requested Keith Anderson of TWC, District 6, Beaumont, to provide written confirmation of TWC's April 18, 1989, verbal approval of ASC's closure methods. To date, TWC has not provided written confirmation.

Since no documentation has been provided in the file to verify that TWC had instructed ASC to disregard the results of the site assessment, ASC is in violation of 40 CFR 280(b).

II. Areas of Concern

1. The 8,000 gal. styrene unloading UST was stated to be out of service since 11/86, which was before the EPA UST regulations became effective. According to 40 CFR 280.73, concerning previously closed USTs, the implementing agency can direct an owner or operator to permanently close a UST in accordance with the December 22, 1988, EPA UST regulations, if in the judgement of the implementing agency, the UST poses a current or potential threat to human health or the environment.

EPA recommends that TWC be given the opportunity to make this determination. As a minimum, EPA recommends that this UST be secured such that the UST can not be accidently or intentionally use.

2. EPA recommends ASC request TWC to remove the 10,000 gal. styrene unloading UST from the regulated UST registered UST list, since the UST is in a concrete "vault" which prohibits contact with earthen materials. The UST is essentially an above ground tank (40 CFR 280.12(i), definition of UST and preamble page 37121).

3. EPA recommends that ASC request that TWC determine whether the four PMHP USTs should be regulated. It is possible that these tanks could be considered sumps, part of the wastewater collection system, or emergency spill tank; however, if the TWC does not grant deregulation of these tanks, ASC must install release detection systems on all of the 300 gal. tanks, immediately, since they are 35 years old.

ACTION ITEMS:

1. Contact TWC to determine plan of action for cleanup of Sites 2, 3 and 5.

2. Obtain TWC's determination of whether the 8,000 styrene unloading UST poses a current or potential threat to human health or the environment, and whether it should be permanently closed in accordance with the current EPA UST regulations.

3. Obtain TWC's determination of whether the PMHP USTs are regulated tanks. If these tanks are considered regulated, release detection systems must be installed immediately.

AMERIPOL SYNPOL COMPANY

Inspection Type: SPCC

Inspection Date: January 17, 1991

Inspection Participants: Steve Reddish, Environment/Ecology
Pamela Pawelek, Environment/Ecology
Dick Saunders, Ameripol Synpol

Summary of Inspection Findings:

During the course of the inspection, the following deficiencies were noted:

1. Inadequate secondary containment at the railroad loading /offloading rack on East Street.

2. Pooling liquid within containment at gasoline tank East of East Street, across from North Process Warehouse.

3. Inadequate integrity of storage tank at the third tank to the west of D Process Building in the carbon black are. The manway plate was leaking.

4. Records of tank inspections and drain valve opening should be made part of the SPCC Plan.

Inspection Type: EPRCA, TSCA Section 5 & 8, and Wetland

Summary of Findings

There was no violations found during these inspections, therefore, the company was in compliance with the regulatory requirements for these medias.

Summary of PCB/TSCA Compliance Inspection Findings

Conducted by: Richard McLaughlin, EPA Field Inspector

Contacted: Lou Levi, Senior Engineer-Environmental, Ameripol Synpol Company, James Fannin, Manger, Environmental Engineering, Uniroyal Goodrich Tire Co., Akron, Ohio

Records indicated that all PCBs were removed in early 1989. Due to a merge of two companies in 1986 they accounted for 25 PCB transformers and 184 PCB capacitors that were replaced with non-PCB items. The company has taken the stand to be free of PCBs, so they elected to replace all transformers that contained PCBs. Many of those items were installed as original equipment by the U.S. Government back in 1943, so it was more economical to replace than retrofill to reclassify. A copy of their annual documents and hazardous waste manifests explaining the final disposition was collected to indicate proper procedures were followed. Other mineral oil type transformers have been sampled and analyzed for PCBs. They have been labelled as non-PCB or containing less than 50_{ppm} and results indicated below 50_{ppm}, but were again analyzed and found to contain 55 and 67_{ppm} which they intend to retrofill and reclassify in the immediate future so they will be completely free of PCB. To their knowledge PCBs were not used in any other operating equipment. Persons contacted were well aware of their responsibility concerning the PCB rule.

ASE B TRRP MULTIMEDIA INSPECTION IMPLEMENTATION

AMERIPOL SYNPOL

MONDAY, JAN. 14, 1991
*RCRA Sampling **
TSCA Inspection (PCB)

TUESDAY, JAN. 15, 1991
*RCRA Sampling **
EPRCA Inspection

WEDNESDAY, JAN. 16, 1991
*RCRA Sampling Ending **
*Air Sampling Beginning **
UST Inspection
*Wetland Inspection **

THURSDAY, JAN. 17, 1991
*Air Sampling **
SPCC Inspection
TSCA Section 5 and 8 Inspection

FRIDAY, JAN. 18, 1991
*Air Sampling **
Closing Conference

* *Tasks that do not require a person from the facility environmental staff (however we encourage the company to provide someone to accompany these teams during their efforts).*

UNITED STATE ENVIRONMENTAL PROTECTION AGENCY
SURVEILLANCE BRANCH
REGION 6 DALLAS, TEXAS

TOXIC RELEASE REDUCTION PROJECT
AMERIPOL SYNPOL COMPANY- PORT NECHES, TEXAS
PHASE A MULTIMEDIA INSPECTION
DECEMBER 10-14, 1990

EXECUTIVE SUMMARY

TOXIC RELEASE REDUCTION PROJECT (TRRP)
AIR TOXIC EXPOSURE AND RISK INFORMATION SYSTEM (ATERIS)
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Description of Project/Investigation

The TRRP Multimedia Investigation is part of a Regional Pilot Project requested by EPA's Deputy Administrator Habicht on December 15, 1989. The focus of the project takes a dual approach for reduction of toxic emissions. The first approach will initiate a review of selected sources identified in the recently released Headquarters (HQ) Air Toxics Exposure and Risk Information System (ATERIS) list of January 2, 1990, also referred to as the "Waxman" list, to explore (1) the possibility of reducing toxic emissions, (2) insuring compliance with all regulatory provisions and (3) conducting a complete multimedia risk assessment. The second approach involves a multimedia compliance investigation and subsequent multimedia risk assessment of selected facilities in the target areas to explore the potential for risk reduction. Personnel from all Divisions within the Regional Office and State Agencies will be participating in this project. ASC was one the five targeted facilities that were identified in the HQ ATERIS list of January 2, 1990.

The inspection at the ASC in Port Neches, Texas was second in a series of unannounced multimedia inspections at selected facilities in the South Texas Industrial area. The multimedia compliance investigation for ASC was performed in two phases (Phase A and B). Phase A included compliance inspections for Clean Air Act (CAA), Clean Water Act (CWA), and Resource Conservation and Recovery Act (RCRA) plus sampling efforts from the CWA team. Also, several wastewater samples were taken to determine if the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation for Benzene Waste Operations were applicable. Phase B consisted of compliance inspections for Toxic Substances Control Act (TSCA), Emergency Planning and Community Right-to-Know Act (EPCRA), Underground Storage Tank (UST), Spill Prevention Control and Countermeasure (SPCC), and Wetland designated representatives. The CAA and RCRA sampling efforts were conducted during Phase B plus additional sampling efforts from the CWA team for stormwater runoff discharges from unpermitted waste streams. The Phase A multimedia inspections was performed December 10-14, 1990 and the Phase B January 14-18, 1991 (see attached schedules)

Most program elements were assigned team members from EPA, including an inspector and a compliance officer, and a State inspector. Two different state agencies were involved. The Texas Air Control Board (TACB) assisted in conducting the Air inspection and Texas Water Commission (TWC) was involved in the RCRA, CWA, and UST inspections. The United States Army Corp of Engineers was involved in the Wetlands inspection. The remaining programs in TSCA, EPCRA, and SPCC are not state authorized, and therefore were conducted by EPA only.

Facility Background and Process Description

The ASC facility was built in 1943 by the United State Government, during World War II, to produce synthetic rubber. In the 1950s, the facility was divided and sold into two separate plants (north and south plant). The north half was sold to Texas U.S. Chemical which later became Synpol Inc. and the south portion to B.F. Goodrich. Each plant was operated independently until August 1986, when the two plants, Synpol Inc. and B.F. Goodrich, merged to form Ameripol Synpol Company, a division of the Uniroyal Goodrich Tire Company (UGTC). Early May 1990, Michelin Tire Company purchased UGTC and ASC became part of Michelin Tire. ASC is not anticipating changing the name of their company.

The styrene-butadiene rubber (SBR) process involves the polymerization of butadiene and styrene (monomer). The polymerization proceeds step wise through a train of reactors. The reactor system is capable of producing either "cold" or "hot" SBR. The lower temperature process is generally called the "cold" SBR process because the reaction is kept at about 50 degrees Fahrenheit (F). In the "hot" process, the reaction temperature is kept about 120 degrees F and this rubber is generally only produced in the CC Line. As the styrene content is increased above 50%, the nature of the latex produced is altered significantly and it can be used in paint. For "cold" polymerization, the monomer-additive emulsion is cooled prior to entering the reactors, generally by using as ammonia refrigerant cooling medium. The facility manufactures SBR using nine process trains, each containing similar but separate pigment, reactor, recovery and finishing units. Each finishing unit contains two parallel process lines for a total of 18 process lines. ASC produces approximately 90 different rubber types with an annual capacity of 800 million pounds of bulk rubber. The bulk rubber is sold to other companies.

The raw materials, butadiene and styrene, are stored at the tank farm prior to transfer to the reactors. The other materials (initiator, activator, dilute soap solution,and modifier) necessary to complete the reaction are all prepared in the pigment area. In the reactors, butadiene, styrene, and other materials are added to initiate the polymerization process. Short stop solution is added to the reaction mixture or latex leaving the reactors to stop the polymerization at the desired conversion. The unreacted butadiene and styrene are separated, purified, and recycled in the recovery area. An antioxidant to protect the rubber from attack by oxygen and ozone is added to the stripped latex in a blend tank. Various extenders such as oils and carbon black are added to improve its properties. Water is removed from the rubber in the finishing area (a detailed process description is provided in the Air Technical Report).

Butadiene is stored in fourteen 30,000-gallon horizontal pressure tanks. One tank stores fresh butadiene received by pipeline from Texaco Chemical Company. Five additional tanks store recycled butadiene obtained from the recovery area. The remaining eight storage tanks contain blended butadiene (mixture of fresh and recycle butadiene).

Styrene is received from ship or barge and is piped to a 600,000-gallon nitrogen-blanketed storage tank. The barge area is owned by Texaco Chemical, however ASC uses this area to unload styrene and butadiene. From the bulk storage tank, the styrene moves to one of eighteen 30,000 gallon horizontal non-pressure tanks. Fresh styrene is stored in two tanks and recycled styrene from the recovery area is stored in six tanks. The remaining ten tanks contain blended styrene. Oils, soaps, antioxidants, catalysts, etc., required in the process are received by truck or tank car and pumped to the respective storage tanks. Carbon black is received by rail cars in pellet form and conveyed to storage. Ammonia, used for chilling the reaction, is received by truck and stored in a horizontal pressure tank. The rubber making process involves five general steps:

1. Formulation of additives which may include: rosin acid soap, fatty acid soap, trisodium phosphate, condensed alkylaryl sulfonate, caustic soda, ferrous sulfate, sodium formaldehyde, sulfoxylate, sodium salt of ethylene diamine tetra acetic acid, tertiary C12 mercaptan, aromatic hydroperoxide, and water. The exact composition is proprietary and may include chemicals not mentioned here as this was compiled from published data. However, raw materials are mixed and injected into the reactors as needed.

2. Polymerization: Butadiene, recycled butadiene, styrene, recycled styrene, and the mixed additives, which includes soap, activators, catalysts, and modifiers, are pumped into one of the four reactor trains where the reaction is controlled by ammonia chillers in the reactors where the reaction goes to about 60% completion in 8 to 10 hours. After completion of the reaction as far as desired for the type of rubber involved, the mixture is pumped to the next section with reaction stopping products such as sodium dimethyl dithiocarbamate, polyamine "H" and any of many anti-form agents being added before the next process.

3. Monomer Recovery: Recovery of the unreacted monomers and their purification is an essential step in economic synthetic rubber production. Butadiene, which has a lower boiling point than styrene, is first vacuum-stripped from the latex in one of two blowdown tanks per reactor train. The butadiene vapors are compressed and condensed before entering a receiver. From there it is pumped to the recycle butadiene storage tank. Afterward, the recycled butadiene is added to fresh butadiene prior to reaction. The receivers are routed through a kerosene scrubber which vent to the atmosphere. The remaining latex then goes to a stripper column where the excess styrene is stripped utilizing steam supplied from Texaco Chemical and sent through a condensing vessel, then to storage to be recycled. The latex continues on to the coagulation section.

4. Coagulation: The product stream is pumped to a blending tank where antioxidant, oil emulsion (if needed) and water brine are mixed with dilute sulfuric acid and other coagulation aids. Carbon black and oil can be added to the latex during the coagulation step to produce a more intimate mixture. The oil is added as an aqueous emulsion, and carbon black is blended into the latex as an aqueous slurry. The coagulated crumb is

separated from the coagulation liquor on a shaker screen. The coagulation liquor is recycled after make-up with fresh acid and brine and blowdown of part of the diluted liquor. The screened crumb is resuspended and washed with water in a reslurry tank. This operation serves to remove extraneous compounds from rubber, particularly residual coagulation liquor. Then the rubber is put through a dewatering machine which squeezes the mixture until the rubber left contains from 5-20% water. The clarified underflow is discharged to a series of wastewater treatment ponds and then to Texaco Chemical for final treatment prior to discharging if to the Neches River. The fine rubber particles remaining after dewatering are screened out, collected, and disposed of in ASC Landfill. After passing through a hammermill to break up the chunks of rubber to small particles for better drying, the rubber goes to dryer area.

5. Drying: After running through the hammermill, the rubber goes to one of 8 dryers in this section. ASC has 4 old three-pass dryers with 8 uncontrolled vents and 4 new single-pass dryers with one uncontrolled vent each. After drying, the rubber is weighed and pressed into bales, wrapped in polyethylene film, and stored prior to shipment. The bales are shipped by rail and trucks. The balers are operated hydraulically with oil or water as the hydraulic fluid. Due to the jarring baling action and the high hydraulic pressures, fluid leaks are frequent and, in the case of oil-driven balers, the leaked oil should be prevented from entering the plant drain system discharging to the Neches River.

In addition to the processing operations described above, other operations are carried out regularly, though not necessarily continuously, which generate considerable quantities of wastewater. These include equipment cleanout and area washdown operations. Principal equipment cleanouts include the polymerization reactors, blowdown tanks, butadiene flash tanks, styrene stripping columns, and latex blend tanks. In most cases high volumes of wastewater are produced that are laden with uncoagulated latex solids and are characterized by a milky white appearance. When the flash tanks and stripping columns are cleaned, the wastewater contains rubber solids, due to premature coagulation of the latex, in addition to uncoagulated latex. Area washdowns are frequent, and the wash water picks up primarily latex, rubber solids, and oil. The ASC storm drainage system is so designed to capture the majority of these waste streams and pump them to the wastewater treatment system. However, there are some waste streams that are uncontrolled and discharge directly into the storm drainage system and then to the Neches River. The carbon black slurrying area is generally contaminated with carbon powder. Area washdowns and storm run off typically pick up the carbon, resulting in a fine carbon suspension.

Compliance History:

Prior to the TRRP multimedia investigation, each media team was asked to review the EPA and State files and to provide a summary description of the enforcement history of the facility including dates and description of violations plus enforcement actions taken by EPA and State. The findings are as follows:

Air: ASC received Notices of Violations (NOV) from Texas Air Control Board (TACB) for nuisance level odors on the following days.

Date of Violation	Date of Notice Receipt
December 23, 1988	January 11, 1989
February 20, 1989	March 1, 1989
October 3, 1989	October 17, 1989
January 15, 1990	February 6, 1990
August 12-17, 1989	February 14, 1990*
February 2 & 8, 1989	February 24, 1990
February 21 & 23, 1990	April 3, 1990
March 29, 1990	May 5, 1990
June 11, 1990	July 9, 1990**

* NOV based on ambient sampling that documented concentrations of styrene and butadiene at levels that were deemed to cause a condition of air pollution.

** NOV included a violation of Rule of Rule 101.6 which requires notification to the TACB of upsets and maintenance.

All of the above NOVs were resolved under an Agreed Board Order which was signed December 14, 1990 and became effective during the Phase A multimedia investigation.

NPDES: The NPDES file reviews revealed that ASC violated their permitted effluent limitations for Total Organic Carbon (TOC), Oil and Grease (O&G) and pH from Outfall 001 on the following dates :

Date	Parameter	Violation	Permit Limit
9-30-1987	TOC max.	240 mg/l	50 mg/l
11-30-1987	pH "	9.7 s.u.	9.0 s.u.
1-31-1988	TOC "	51 mg/l	50 mg/l
7-31-1988	TOC "	51 mg/l	50 mg/l
10-12-1988	pH "	9.2 s.u.	9.0 s.u.
10-31-1988	pH "	9.2 s.u.	9.0 s.u.
10-31-1988	TOC "	62 mg/l	50 mg/l
2-7-1989	O&G "	50.5 mg/l	15 mg/l
2-28-1989	O&G "	50 mg/l	15 mg/l
12-28-1989	pH "	9.4 s.u.	9.0 s.u.
12-29-1989	pH "	9.5 s.u.	9.0 s.u.
12-30-1989	O&G "	134 mg/l	15 mg/l
1-20-1990	TOC "	62 mg/l	50 mg/l

All the TWC annual inspection reports from 1987 to March 1990 identified the ASC flow monitoring system as being deficient, however, no other major deficiencies were noted. On July 3, 1989 ASC was issued a Warning Letter for the flow recorder deficiency and on July 3, 1990 a Warning Letter was issued for the December 29 and 30, 1989 and January 20, 1990 effluent violations. No formal enforcement action has been taken against ASC.

RCRA: The EPA RCRA files did not identify any violations or any actions taken against ASC. Since ASC is considered to be a small quantity generator (SQG) only three TWC inspections have been performed prior to the TRRP multimedia inspection. The last TWC inspection, March 27, 1987, at ASC identified a few Class 2 violations (paper work violations). TWC issued a NOV on April 8, 1987 and ASC came into compliance on April 23, 1987.

TSCA, EPCRA, SPCC, UST, and Wetlands: There were no major violations found during the file reviews from these medias, therefore, no actions were taken against ASC.

A multimedia compliance investigation and evaluation of 1,3-butadiene emission were conducted at ASC by EPA National Enforcement Investigations Center (NEIC), on January 22-25, 1990 and February 21 through March 5, 1990. The report indicated that ASC failed to comply with all the requirements of the CAA, CWA, RCRA, TSCA, and SPCC .

Toxic Release Reduction Plan

On September 6, 1990 ASC submitted their toxic release reduction plan to EPA describing the action the facility is taking or will take to reduce toxic emission into the environment. ASC's toxic plan addresses only air emissions. All of the provisions of the toxic plan are addressed in the TACB Board Order. During the Phase A air multimedia inspection, the toxic plan was reviewed and discussed to determine what toxic emissions have been reduce or eliminated. Since ASC's toxic plan only addresses air, a summary of the plan evaluation is found on pages 21- 24 of the ASC Multimedia Air Pollution Inspection Report.

Phase A Sampling Efforts

The Phase A multimedia investigation at ASC included sampling efforts from the CWA or NPDES team. The objective of the sampling inspection is to ensure compliance with all regulatory provision of the NPDES permit and to determine if toxic release to the receiving stream have occurred. Through this sampling inspection we will attempt to associate the releases with their sources and determine the quantities of pollutants being discharged. Also wastewater samples were collected at various locations for the purpose of determining compliance with 40 CFR 61.355, Subpart FF- National Emission Standard For Benzene Waste Operations.

Time weighted 24-hour composite samples from Outfall 001 (uncontaminated steam condensate and stormwater runoff) and Outfall 301 settling basin (process wastewater and contaminated stormwater runoff discharging to Texaco wastewater treatment plant) were collected for analyses for all priority pollutants, permitted parameters and biomonitoring. Grab samples from two points in the storm drainage system (Point A and B) were collected and analyzed for all priority pollutants.

Three samples were taken at each of five locations; the styrene decanters on the DA, DB, and CA Recovery lines, the south styrene water stripper and the styrene decanter tank. These samples were collected to determine benzene concentration.

The laboratory results from Outfall 001 and the two points in the storm drain were in compliance with permit limitation and showed no toxic releases. The Cyprinodon variegatus bioassay for Outfall 001 revealed no significant effect. The 24 hour composite at Outfall 301 for acid base/neutral compounds (ABN), pesticide/PCB, and permitted pollutants (BOD, COD, NH3, TOC and TSS) showed ABN pollutant of Phenol (432 ug/l), Benzyl Alcohol (585 ug/l) and permitted pollutants of BOD (64 mg/l), COD (720 mg/l), TOC (56mg/l) and TSS (55 mg/l). There was significant effect from the sample collected at Outfall 301 on the bioassay test organism in test concentrations $\geq$12% effluent. The 8-day EC50 for 301 was 8% effluent. The volatile compounds (VOAs) found in the discharge of Outfall 301 were acetone (1600 ug/l), styrene (1390 ug/l), ethylbenzene (1480 ug/l) and toluene (177 ug/l).

The samples collected from the styrene recovery lines for benzene concentration in waste streams were analyzed for VOAs only. There was no benzene detected in any of the samples. However styrene was detected at extremely high levels. The styrene levels ranged from 949 ug/l (styrene stripper) to 822,000 ug/l (recovery line DA). Because of the very high styrene levels appropriate dilutions were required to obtain the first reportable analysis. Acetone was also detected at high levels in these samples with levels ranging from 3230 ug/l (styrene stripper) to 53,700 ug/l (styrene decanter tank). There was no styrene or acetone found in the sample blank water.

SUMMARY OF FINDINGS

AMERIPOL SYNPOL
TRRP Inspection
Preliminary Results - Air

I. Summaries of Significant Findings

A) Findings

NESHAPs

1) Asbestos notifications - 40 CFR 61.145(d)(1) requires a company to submit a summary notification of all planned small renovations involving individual nonscheduled operations when the total amount of all friable asbestos materials exceeds the "de minimis" amounts specified in the regulations. This notification should predict removal operations occurring during a period not to exceed one year.

The company submitted such a notice for the period covering January through December 1990 on July 23, 1990. The company should document that no asbestos renovation operations covered under this notification occurred during the period from January 1 through August 6, 1990. Note that this may also be a problem with earlier annual notifications.

B) Regulatory Requirements

NSPS Subpart Kb

The company recently constructed a latex storage tank that is subject to the NSPS requirements for storage tanks containing volatile organic liquids. This tank has a storage capacity of 570 m^3 and stores a material with a true vapor pressure at 70° F of 2.7 kPa (0.8 in Hg). 40 CFR 60.110b(c) states that vessels with a capacity greater than or equal to 151 m^3 storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt from the requirements of Subparts A and Kb except for keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel required by 40 CFR 60.116b(b).

We understand that the contents of the storage tank will be steam-heated. The company is advised to determine the true vapor pressure (TVP) of the VOC stored in the tank at the maximum storage temperature. If the TVP is equal to or greater than 3.5 kPa, other portions of Subpart Kb as well as the general requirements of Subpart A may apply.

NESHAP

2) New regulations were promulgated this year at 40 CFR 61, Subpart FF for the control of benzene in waste operations (including API separators) at chemical manufacturing plants. 40 CFR 61.357 requires that each facility subject to this subpart shall submit an initial report with the following information:

a) total annual benzene quantity as determined by the methods set forth in 61.355(a). This quantity should be documented.

b) a table identifying each waste stream (defined as the waste generated by a particular process unit, product tank, or waste management unit) and whether or not the waste stream(s) will be controlled for benzene emissions in accordance with the requirements of Subpart FF.

c) for each waste stream identified as not being controlled for benzene emissions, the following information shall be added:

1) whether or not the water content of the waste stream is greater than 10%

2) whether or not the waste stream is a process wastewater stream, product tank drawdown, or landfill leachate

3) annual waste quantity for the waste stream

4) range of benzene concentrations for the waste stream

5) annual average flow-weighted benzene concentration for the waste stream

6) annual benzene quantity for the waste stream.

The company submitted its initial report on May 11, 1990, to both EPA Region 6 and the TACB. The report was deficient in that it did not contain all the information required by Subpart FF.

We also have concerns about the applicability of this subpart to the several process waste streams generated at the plant. We would recommend that sample taps be installed so that samples can be obtained in accordance with the procedures outlined in 61.355(c)(2). If sampling results show that benzene levels can trigger the applicability of this subpart, further portions of this subpart may apply to the company.

SIP

3) TACB Rule 111.21 provides that no opacity from a stationary flue built on or before January 31, 1972, may exceed 30% over a 5-minute period. This rule is part of the Texas State Implementation Plan and is therefore federally enforceable. We have noticed that the opacity from the carbon black incinerator stack is in the range from 20 to 30%. The company should take steps to ensure that the opacity be controlled to a level at or below 20%. We also recommend that the company consider installing a continuous opacity monitor on the incinerator stack, as this is the only major source of visible emissions in the plant.

II. Areas of Concern

Leak Detection and Repair (LDAR)

Overall, the LDAR program is a step in the right direction to accomplish the goal of toxic emission reductions.

In order to assist in complying with the Board Order, the company should:

1) ensure the monitoring contractor uses a standard of 500 ppm nominal concentration for calibration.

2) make a list of any equipment claimed exempt from quarterly monitoring because the process stream contains less than 1% butadiene and/or styrene or is less than 5 kPa below ambient pressure,. This list should include the reason for inclusion and location on a plot plan.

3) make a list of valves considered to be inaccessible for quarterly monitoring. This list should document why the component is considered inaccessible and the schedule for monitoring of such equipment.

4) modify the recordkeeping system to show that the first attempt to repair was within 5 days after discovery.

5) clearly document and justify why any repair was delayed until the next turnaround.

We noted on our inspection tour that several pressure relief valves on certain vessels located on the CA/CB recovery lines vented to the recovery absorber vent line. This line is currently not controlled by a flare and thus these valves should be monitored as part of the LDAR program. We did not observe any way for monitoring to be conducted at these valves.

We reviewed first quarter LDAR reports for 16 out of 19 units. Our review indicated the following:

1) 0.26% of all components were leaking at a rate greater than of equal to 10,000 ppm,

2) 0.19% of all components were leaking at a rate greater than or equal to 500 ppm and less than 10,000 ppm, and

3) 0.55% of all monitored components had detectable leaks of less than 500 ppm.

Since more than half of the components which were found to be leaking were measured to be less than 500 ppm, we think reductions in emissions could be achieved by repairing all detectable leaks. In addition, we recommend that the company monitor components that have been repaired on a monthly basis for at least two months to ensure that no leaks that reoccurred.

We feel that every effort should be made to replace the current pumps and compressors with systems designed to prevent and/or capture leaks.

Dryer Stacks

We are encouraged by the company switching to EPA-approved models. We would also like consultation with the EPA Air Programs Branch as well as the TACB on issues such as point and building downwash effects. This will help ensure that in future risk assessments the results will be more acceptable to EPA.

We believe that the dryers are the largest source of VOC emissions at the plant and feel that additional means of controlling these emissions above and beyond the residual styrene controls already in place should be investigated.

Miscellaneous

A. The company should maintain a record of all emission increases and decreases so as to assist the TACB in determining whether PSD or nonattainment NSR would be triggered.

B. The company should publicize the existence of its odor hot-line more extensively.

AMERIPOL SYNPOL COMPANY

Inspection Type: RCRA Compliance Evaluation

Inspection Dates: December 10 - 12, 1990

Inspection Participants:

Caroline L. Abbott (author), EPA Region 6
Gene Keepper, EPA Region 6
Agatha Benjamin, EPA Region 6
Vince Malott, EPA Region 6
Kirk Coulter, TWC District 6
Dick Saunders, Ameripol Synpol

Summary of Significant Findings:

40 CFR 262.20(a)

The generator failed to include the following information on two manifests with Texas state manifest document numbers 0015238, dated 8/23/90 and 00209447, dated 2/9/90: a) a generator-assigned unique manifest document number as required in item #1 on the manifest, b) a written indication for discrepancies of the number of containers and total volume of manifested waste as required under item #19 on the manifest.

40 CFR 262.34(d)

The generator failed to ship offsite one drum, marked with the words hazardous waste and dated 10/11/89, within the 180 day limit.

40 CFR 265.31

The generator has failed to meet the requirements of preparedness and prevention by maintaining and operating the facility to minimize release of hazardous waste or hazardous waste constituents to soils which could threaten the environment. There are numerous areas of dead vegetation with evidence of visible contamination as well as a number of unidentified drums containing unknown materials.

40 CFR 265.171

The generator failed to maintain a drum, marked with the words "Hazardous Waste" and containing an unknown substance, in a designated container storage area.

40 CFR 268.7(a)(6)

The generator failed to keep records of all notifications or certifications for land disposal restricted wastes sent to offsite facilities after August 7, 1988.

Areas of Concern:

1. A requirement by Texas Water Commission is that all solid wastes be listed on the Notice of Registration. The generator has failed to include lead/acid batteries as one of the wastes generated.

2. Several areas where visible soil contamination and dead vegetation were identified during the site investigation. They are as follows:

a) Two used drum storage areas located in the "boneyard" or salvage yard just west of the north cooling tower at the north end of the facility property.

b) Truck unloading station at the north oil emulsion prep unit, northern end of West Loop Road.

c) West of south plant paint shop there are some unidentified drums surrounded by dead vegetation. there is also visible yellow paint contamination on the ground in the area.

d) In the vicinity of the diesel storage tank near the water treatment plant on the west side of the facility property. There is visible staining in and standing water surrounding the diked containment area for this tank.

e) To the north of the API separator at the southern boundary of the facility property is a used drum storage area. The drums are located on top of a metal grate over a concrete containment basin. The basin contains standing liquid and apparent overflow has occurred onto the surrounding soils.

f) A number of used drums at the southeast corner of the facility property are underlain by visibly stained soils. This area is within 20 feet of the southern stormwater drainage ditch and 40 feet of the eastern stormwater drainage ditch.

g) There are visible spills which have occurred at the eastern separator along East Loop Road.

h) There is an area of dead vegetation which runs perpendicular to the north from the A-line Process building. It appears that process water was purposely discharged from this area.

NPDES TRRP REPORT
AMERIPOL-SYNPOL

SUMMARY OF APPARENT VIOLATION

I. Summaries of Significant Findings

LABORATORY

1. Part I.A. of Permit and 40 CFR Part 136 (Table II)
   The pH analysis is not conducted in situ and exceeds required holding time of 15 minutes.

2. 40 CFR Part 136 (Table I.B.)
   TOC procedure does not include purgeable organic carbons.

3. Part II.B.1. of Permit
   During pH meter calibration, temperature compensation (slope) is not used.

4. Part II.B.1. of Permit
   The thermometer used for sample refrigeration and in situ monitoring is not NIST (or NBS) traceable.

5. 40 CFR Part 136 (Table II)
   The temperature in the sample refrigerature was greater than 4 C (9.5 C).

6. Part II.B.1. of Permit
   The balance used in the Oil and Grease procedure was not being calibrated.

FACILITY SITE REVIEW

7. Part II.B.1 of the Permit
   Contaminated wash water from the railcar area near the B-line basin was draining from several breaks in the curbing around the railroad tracks into the storm drainage area creating an unauthorized discharge situation.

8. Part II.B.1. of the Permit
   An overflow pipe in a dike around three tanks (# 38,39 and 42),labelled as containing a caustic solution, is creating a potential for stormwater contamination.

9. Part II.B.1. of the Permit

A styrene transfer pump to a styrene storage tank in the tank farm area was not properly segregated from the stormwater system. An oily residue and other evidence of contamination were seen in the storm drainage area.

II. AREAS OF CONCERN

1. The major area of concern is the inadequate segregation of the process water from the storm drainage system. Throughout the plant, several locations were noted which indicated a strong possibility of process wastewater entering the receiving stream.

2. Another source of contamination could be from a sanitary line which runs along the vicinity of an open ditch on the south side of the plant. Judging from the age of the plant and the visual observation (green stagnant water around a manhole), it appears there might be a small break in the line which seeps to the surface and into the storm drain.

3. The facility does not have the capability of measuring the entire range of flows. Flows may vary from 0.02 MGD up to 14 MGD (reportedly), but the present system can only measure up to 0.7 MGD.

;E A TRRP MULTIMEDIA INSPECTION IMPLEMENTATION

AMERIPOL SYNPOL COMPANY

MONDAY, DEC. 10, 1990
NPDES Sampling
Air Inspection
RCRA Inspection

TUESDAY, DEC. 11, 1990
NPDES Sampling
Air Inspection
RCRA Inspection

WEDNESDAY, DEC. 12, 1990
NPDES Sampling
Air Inspection
RCRA Inspection

THURSDAY, DEC. 13, 1990
NPDES Inspection

FRIDAY, DEC. 14, 1990
NPDES Inspection
Closing Conference

TEXAS AIR CONTROL BOARD
6330 Highway 290 East
Austin, Texas 78723

AGREED BOARD ORDER

NO. 90-09

On this the 14th day of December, 1990, the Texas Air Control Board considered the matter of enforcement actions pertaining to the following persons:

Ameripol Synpol Company, Jefferson County
Amoco Oil Company, Galveston County
Chem-Pac, Inc., Kimble County
Coastal Refining & Marketing, Nueces County
Jac-Tex Manufacturing, Inc., Cherokee County
Mobay Synthetics Corporation, Harris County
Modern Tire Service, Inc., Tarrant County
Pioneer Concrete of Texas, Incorporated, Harris County
Rexene Products Company and Lyondell Polymers Corporation, Harris County
Southwest Cabinet Corporation d/b/a Anton Cabinetry, Tarrant County
Wilder Management Associates, Inc., Travis County

The terms and conditions under which these matters are resolved are contained in attachments 90-09(a) through 90-09(k) which are attached to this order and incorporated as is fully set forth herein.

PASSED AND APPROVED at the regular meeting of the Texas Air Control Board in Austin, Texas, on this the 14th day of December, 1990.

TEXAS AIR CONTROL BOARD

BY: Dick Whittington

Dick Whittington, P.E., Chairman

Calvin B. Parnell

Calvin B. Parnell, Jr., Ph.D., P.E., Member

Bob G. Bailey

Bob G. Bailey, Vice-Chairman

William H. Quortrup, Member

John L. Blair, Member

C. H. Rivers, Member

Marcus M. Key, M.D., Member

Warren H. Roberts, Member

Mary Anne Wyatt, Member

ATTEST:

Steve Spaw, P.E.
Executive Director

(SEAL)

TEXAS AIR CONTROL BOARD
6330 Highway 290 East
Austin, Texas 78723

AGREED BOARD ORDER

AMERIPOL SYNPOL COMPANY

NO. 90-09(a)

The Texas Air Control Board (the Board) hereby resolves the matter of enforcement action regarding Ameripol Synpol Company (the company) in the form of an Agreed Board Order pursuant to Sections 382.023(a) and (b), 382.082(c) and (d), and 382.088 of the Texas Clean Air Act (Act), Texas Health & Safety Code Chapter 382. The staff of the Board (the staff) and the company have agreed on a settlement of the matters involved in this enforcement action, subject to the approval of the Board.

In settlement of this enforcement action and solely for the purpose of this Agreed Board Order, the parties have agreed and stipulated as follows:

1. That the company owns and operates a styrene butadiene rubber manufacturing plant located at 1215 Main, Port Neches, Jefferson County, Texas.

2. That the above plant consists of one or more sources as defined in Section 382.003(9) of the Act.

3. That the company as owner and operator of the above plant is alleged to have violated Board Rule 101.4 and Section 4.01(a) [redesignated as Section 382.085(a) effective September 1, 1989] of the Act by causing, suffering, allowing or permitting the emission of an air contaminant which caused or contributed to a condition of air pollution on December 23, 1988; February 20, 1989; October 3, 1989; January 15, 1990; February 2, 1990; February 8, 1990; February 21, 1990; February 23, 1990; March 29, 1990; and June 11, 1990.

4. That the company as owner and operator of the above plant is alleged to have violated Board Rule 101.6 and Section 382.085(b) of the Act by failing

to notify the Executive Director and the appropriate local air pollution control agency as soon as possible of a major upset condition which occurred on June 11, 1990 which caused or may have caused an excessive emission that contravenes the intent of the Act or the regulations of the Board.

5. That notices of the apparent violations of Board Rule 101.4 referred to in paragraph 3 above were received by the company on or about January 11, 1989; March 1, 1989; October 17, 1989; February 6, 1990; February 24, 1990; March 18, 1990; April 3, 1990; May 5, 1990; and July 9, 1990.

6. That notice of the apparent violation of Board Rule 101.6 referred to in paragraph 4 above was received by the company on or about July 9, 1990.

7. That the company and the staff agree that the allegations set forth in the Board's file regarding this enforcement action, concerning violations of Board Rules 101.4 and 101.6 are hereby settled and compromised. It is understood that the entry of this Agreed Board Order shall not constitute an admission by the company of any violations alleged in paragraphs 3 and 4.

8. That administrative penalties in the amount of Seventy-Three Thousand Dollars ($73,000.00) should be recovered by the Board for the violations alleged in paragraphs 3 and 4.

9. That the company has placed in the possession of the Board the sum of Seventy-Three Thousand Dollars ($73,000.00) for deposit in the General Revenue Fund of the State Treasury, as payment of administrative penalties assessed.

10. That the company has submitted Permit Application No. C-9908 for the replacement of three triple pass rubber crumb dryers with three single pass

rubber crumb dryers; Permit No. C-9908 was issued on November 27, 1989; and installation of the "E" dryer replacement was completed on August 16, 1990.

11. That the company agrees to maintain compliance with Board Rules 101.4 and 101.6 and Sections 382.085(a) and (b) of the Act from and after the date of this Agreed Board Order and to take the following actions:

(a) The company shall replace two triple pass rubber crumb dryers with single pass rubber crumb dryers according to the following schedule:

(1) The company shall install the "C" dryer replacement no later than September 30, 1991; and

(2) The company shall install the "I", "S", or "T" dryer replacement no later than September 30, 1992.

(b) To reduce the residual styrene content in the stripped latex, the company has installed a twelfth tray in each of the six north unit stripping towers. Until March 31, 1991, the company shall maintain an interim residual styrene content in the stripped latex at or below an annual average of 0.06 weight percent wet and a daily average of 0.085 weight percent wet; provided, however, that this requirement shall not apply to the manufacture of special polymer types with greater than 24.5 percent bound styrene. The daily average residual styrene shall be calculated by averaging the value from each of the three shifts in that day. Any time the residual styrene concentration on a stripping column exceeds 0.085 weight percent wet based on a single sampling analysis, prompt corrective action shall be taken to achieve compliance with the residual styrene concentration. While the residual styrene concentration exceeds 0.085 weight percent wet, latex processing may continue, provided that either:

(1) latex is blended to meet the daily average residual styrene concentration limit before processing or (2) processing rates are reduced such that total styrene feed rate to the finishing lines does not exceed 251.5 pounds per hour. From the time the exceedance is detected, records shall be maintained every two hours of the latex residual styrene concentration out of the stripper and the latex residual styrene concentration and total feed rate out of the blend tanks until compliance with the stripper latex residual is demonstrated for two consecutive sampling analyses.

(c) After March 31, 1991, the company shall maintain the residual styrene content in the stripped latex at or below an annual average of 0.04 weight percent wet and a daily average of 0.08 weight percent wet; provided, however, that this requirement shall not apply to the manufacture of special polymer types with greater than 24.5 percent bound styrene. The daily average residual styrene shall be calculated by averaging the value from each of the three shifts in that day. Any time the residual styrene concentration on a stripping column exceeds 0.08 weight percent wet based on a single sampling analysis, prompt corrective action shall be taken to achieve compliance with the residual styrene concentration. While the residual styrene concentration exceeds 0.08 weight percent wet, latex processing may continue, provided that either: (1) latex is blended to meet the daily average residual styrene concentration limit before processing or (2) processing rates are reduced such that total styrene feed rate to the finishing lines does not exceed 251.5 pounds per hour. From the time the exceedance is detected, records shall be maintained every two hours of the latex residual styrene concentration out of the stripper and the

latex residual styrene concentration and total feed rate out of the blend tanks until compliance with the stripper latex residual is demonstrated for two consecutive sampling analyses.

(d) For those special polymers to be manufactured at the plant with greater than 24.5 percent bound styrene, the residual styrene content prior to coagulation shall not exceed an annual average of 0.14 weight percent wet and a daily average of 0.35 weight percent wet.

(e) The company shall keep daily records of all latex production rates (pounds per hour), latex type, residual styrene concentration in the stripped latex, residual styrene concentration after reaction for special polymer types with a bound styrene content greater than 24.5 percent, and residual styrene concentration prior to coagulation. In addition, records of latex type, feed rates, and calculated residual styrene after blending and immediately before processing shall be maintained for each finishing line. Calculated residual shall be based on residual analysis after stripping or reaction. The company shall maintain records of such measurements and calculations for at least two years, and make such records available to the staff upon request.

(f) The company shall conduct a leak detection and repair (LDAR) program to reduce fugitive emissions of 1,3 butadiene and styrene as specified in Attachment A entitled "Leak Detection and Repair Program for Piping, Valves, Flanges, Pumps and Compressors with Intensive Directed Maintenance" which is hereby incorporated by reference herein for all purposes. With the written approval of the Executive Director, which shall be reasonably granted, the

company may modify the LDAR program to conform with an applicable United States Environmental Protection Agency LDAR program.

(g) On or before the date which is sixty (60) days after the date of entry of this Agreed Board Order, the company shall submit a plan to the staff for the routing of emissions from the four kerosene scrubbers at the above plant to a flare (the flare plan). As part of the flare plan, the company shall submit the following information on the flare to the staff:

(1) Specific design and operational details and calculations which demonstrate that over the entire range of possible flow rates and compositions the flare shall meet each requirement of Standard Exemption number 80 or 40 CFR 60.18;

(2) Detailed explanations of the basis for the flow rates and compositions used in the calculations, at least one sample calculation, and a summary of the results of all the calculations;

(3) A completed Table 8, a copy of which is attached to this Agreed Board Order as "Attachment B", which shall include drawings of the flare tip and the ignition system; and

(4) A method for monitoring, on an ongoing basis, the British Thermal Unit value and the flow rates of the waste gas going to the flare.

(h) Within six months after the date on which the staff issues the final draft of its written comments concerning the flare plan required by paragraph 11(g) above (the staff's final comments), the company shall route the emissions from the four kerosene scrubbers at the above plant to a flare in

accordance with the staff's final comments. The flare shall meet each requirement of Standard Exemption number 80 or 40 CFR 60.18.

(i) On or before January 1, 1991, the company shall submit to the staff for approval data for a dispersion modeling study evaluating the off-property impacts of the 1,3 butadiene emissions from the above plant, taking into consideration the actions to be completed pursuant to subparagraphs 11(g) and (h) above. The company shall complete the modeling study as per TACB modeling guidelines and submit a report to the staff within three (3) months after the staff's written approval of the company's data.

(j) On or before January 1, 1991, the company shall submit a plan for approval by the staff to determine the concentration of 1,3 butadiene and styrene in the process wastewater at the above plant. As part of such plan, the company shall conduct sampling to characterize the concentrations coming from each type of process wastewater source at the above plant. Within three (3) months of the staff's written approval of the plan, the company shall submit to the staff the results of the sampling and an analysis which either demonstrates to the satisfaction of the staff that the process wastewater does not make a significant contribution to the 1,3 butadiene or styrene emissions from the plant or proposes means of reducing emissions from wastewater sources and a schedule for implementation to reduce such emissions.

(k) From and after the date of entry of this Agreed Board Order, the styrene content of the process wastewater from each of the styrene decanter and stripper systems at the above plant shall not exceed 200 parts per million by weight. Additionally, the company shall sample and analyze these process

wastewater sources on a daily basis to show and maintain compliance with this requirement. The company shall maintain records of such measurements and calculations for at least two years, and make such records available to the staff upon request.

(l) On or before June 1, 1992, all dryer stacks shall be raised to a height of not less than 100 feet above the ground. Sampling ports and platforms shall be incorporated into the design of all the dryer stacks according to the specifications set forth in Attachment C entitled "Chapter 2, Stack Sampling Facilities", which is hereby incorporated by reference herein for all purposes. Alternate sampling facility designs may be submitted for approval by the staff.

(m) On or before December 15, 1990, the company shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the crumb rubber dryer stacks at the above plant. Sampling and analysis will be conducted using equipment, methods and procedures approved by the staff. The staff shall be contacted to schedule a pretest meeting not less than 30 days prior to sampling, to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data and to review the format procedures for submitting the test reports. Reports of the results of such sampling shall be submitted to the staff by January 15, 1991.

(n) The company shall submit to the TACB staff for approval data for an atmospheric dispersion modeling study evaluating the short-term off-property impacts of the styrene emissions from the above plant, taking into consideration

the actions to be completed pursuant to subparagraphs 11(c), (d), (f), (j), (k), (l), and (m) above. The data must be submitted no later than one month after the requirements of subparagraph 11(j) have been completed. The company shall complete the modeling study as per TACB modeling guidelines and shall submit a report to the staff within three (3) months after the staff's written approval of the company's data.

(o) On or before January 1, 1991, the company shall begin to operate and maintain a fence-line monitoring program which will coincide with the monitoring program of the Southeast Texas Regional Planning Commission and other industry monitoring programs in the area. The monitoring program shall measure the 24-hour average concentration of styrene, 1,3 butadiene, and benzene at the fence-line once every twelve (12) days. This program will conclude one year after all actions identified in paragraphs 11(a) through 11(m) of this order are completed. All data from such sampling shall be maintained for a period of two (2) years and made available to the staff upon request.

12. That all air pollution abatement equipment shall be maintained in good working order and operated properly during normal operations.

13. That any procedures which might otherwise be authorized or required in this action are waived in the interest of a more timely resolution of the matter.

For purposes of this Agreed Board Order only and based on the stipulations and agreements of the parties, the Texas Air Control Board hereby finds that the

violations described in paragraphs 3 and 4 have occurred and that administrative penalties are warranted in the amount of Seventy-Three Thousand Dollars ($73,000.00).

It is, therefore, ordered by the Texas Air Control Board that Ameripol Synpol Company pay administrative penalties in the amount of Seventy-Three Thousand Dollars ($73,000.00).

It is further ordered that Ameripol Synpol Company shall:

(1) Undertake and complete by the specified dates all items of the compliance plan set forth in paragraph 11;

(2) Maintain all air pollution abatement equipment in good working order and operate said equipment properly during normal operations; and

(3) From and after the date of this Agreed Board Order, maintain compliance with Board Rules 101.4 and 101.6.

APPROVED AS TO FORM AND SUBSTANCE:

Michael D. Chisum, Staff Attorney — November 30, 1990 (Date)

W. Spence - V.P. Operations for the company — 11/28/90 (Date)

ATTACHMENT A

Leak Detection and Repair Program
for
Piping, Valves, Flanges, Pumps and Compressors
in
Styrene or 1,3-Butadiene Service

A. This requirement shall not apply (1) where the total of the styrene and 1,3-butadiene concentrations in a stream is less than one percent by weight (1.0 Wt %) or (2) where the operating pressure is at least 5 kilopascals (0.725 psi) below ambient pressure. Equipment excluded from this program shall be identified, including reason for the claimed exemption, in a list and on a plot plan of the process area to be made available to regulatory personnel upon request.

B. Construction of new and reworked piping, valves and pump and compressor systems shall conform to applicable ANSI, API, ASME or equivalent codes.

C. New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.

D. To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Non-accessible valves shall be identified in a list to be made available to regulatory personnel upon request.

E. Accessible flanges and other piping connections shall be monitored by leak-checking for fugitive volatile organic compound (VOC) emissions at least quarterly using an approved gas analyzer as defined by 40 CFR 60 Appendix A, Method 21. New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on piping smaller than two-inch diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas tested or hydraulically tested at no less than normal operating pressure and adjustments made as necessary to obtain leak-free performance.

Each open-ended valve or line shall be equipped with a cap, blind flange, plug or a second valve.

F. Accessible valves shall be monitored by leak-checking for fugitive VOC emissions at least quarterly using an approved gas analyzer as defined by 40 CFR 60 Appendix A, Method 21. Sealless/leakless valves (including but not limited to bellows and diaphragm valves) and relief valves equipped with a rupture disc or venting to a control device are not required to be monitored. For each valve equipped with a rupture disc, a pressure gauge shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity but no later than the next process shutdown.

G. With the exception of those pumps dedicated to and used exclusively in latex service, all new and replacement pumps and compressors shall be equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal. These seal systems need not be monitored and may include, but are not limited to, dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order or seals equipped with an automatic seal failure detection and alarm system.

Submerged pumps or sealless pumps (including but not limited to diaphragm, canned or magnetic driven pumps) may be used to satisfy the requirements of this program and need not be monitored.

All other pump and compressor seals shall be monitored by leak-checking for fugitive VOC emissions at least quarterly using an approved gas analyzer as defined by 40 CFR 60 Appendix A, Method 21.

H. Damaged or leaking valves, flanges, compressor seals and pump seals found to be emitting VOC in excess of 500 ppmv or found by visual inspection to be leaking (e.g. dripping liquids) shall be tagged and replaced or repaired. Every reasonable effort shall be made to repair a leaking component, as specified in this paragraph, within 15 days after the leak is found. A first attempt at repair shall be made no later than 5 days after the leak is detected.

If the repair of a component would require a unit shutdown, the repair may be delayed until the next scheduled shutdown. All leaking components which cannot be repaired until a scheduled shutdown shall be identified for such repair by tagging. The Executive Director, at his discretion, may require early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting shutdown.

I. The results of the required fugitive monitoring and maintenance program shall be recorded in a log and shall be kept for at least 2 years and made available to the Executive Director or his designated representative upon request. Records shall indicate, but not be limited to, the following: process unit identification, appropriate dates of initial testing and each attempt to repair a leak, test methods, leaking component identification number, maximum instrument readings, repair results and corrective actions taken, and reasons a component cannot be repaired until process unit shutdown.

J. Compliance with the requirements of this program does not assure compliance with requirements of TACB Regulation V, an applicable New Source Performance Standard or an applicable National Emission Standard for Hazardous Air Pollutants and does not constitute approval of alternative standards for these regulations.

ATTACHMENT B

TABLE 8

FLARE SYSTEMS

Number from Flow Diagram	Manufacturer & Model No. (if available)

CHARACTERISTICS OF INPUT

Waste Gas Stream	Material	Min. Value Expected (scfm [70°F, 14.7 psia])	Ave. Value Expected (scfm [70°F, 14.7 psia])	Design Max. (scfm [70°F, 14.7 psia])
	1.			
	2.			
	3.			
	4.			
	5.			
	6.			
	7.			
	8.			
% of time this condition occurs				

	Flow Rate (scfm [70°F, 14.7 psia])		Temp. °F	Pressure (psig)
	Minimum Expected	Design Maximum		
Waste Gas Stream				
Fuel Added to Gas Stream				

	Number of Pilots	Type Fuel	Fuel Flow Rate (scfm [70°F & 14.7 psia]) per pilot

For Steam Injection	Steam Pressure (psig)		Total Steam Flow	Temp. °F	Velocity (ft/sec)
	Min. Expected	Design Max.	Rate (lb/hr)		
	Number of Jet Streams	Diameter of Steam Jets (inches)	Design basis for steam injected (lb steam/lb hydrocarbon)		

For Water Injection	Water Pressure (psig)		Total Water Flow Rate (gpm)		No. of Water Jets	Diameter of Water Jets (inches)
	Min. Expected	Design Max.	Min. Expected	Design Max.		

Flare Height (ft)	Flare tip inside diameter (ft)
Capital Installed Cost $_____	Annual Operating Cost $_____

Supply an assembly drawing, dimensioned and to scale, to show clearly the operation of the flare system. Show interior dimensions and features of the equipment necessary to calculate its performance. Also describe the type of ignition system and its method of operation. Provide an explanation of the control system for steam flow rate and other operating variables.

CHAPTER 2

STACK SAMPLING FACILITIES

General

Most sampling for representative results requires minimum sampling facilities for which the TACB has established the guidelines presented in this chapter. Stack sampling operations utilize a system of equipment to traverse a cross-section of the stack or duct through ports located such that a representative sample can be obtained. Normally, a monorail structure is erected so the cross-section of the stack may be traversed on two diameters for circular stacks and on a matrix layout for rectangular or other shaped stacks.

These guidelines cannot anticipate all situations, and special cases will occur. Non-standard or alternate installations are therefore evaluated on an individual basis, and in such instances detailed plans should be sent to the TACB for review and approval before the construction of stack sampling facilities is initiated.

Existing sources with stack sampling facilities approved previously by the TACB may not normally be required to meet these additional specifications described in this chapter. The 220-volt, 50-amp electrical outlet at the stack base as described in the Power Supply section of this chapter may, however, be necessary in certain cases due to the increased power requirements of TACB monitoring systems. The following guidelines constitute minimum requirements for safe and accessible stack sampling facilities:

Physical Features

Before consideration is given to the installation of sampling ports and platforms, certain dimensions and other features of the stack and stack gas must be verified in order that a representative sample is possible.

- Stack diameter must be at least one foot.
- Stack gas velocity head must be at least 0.1 inches of water.
- The stack must have at least 2-1/2 diameters of uniform undisturbed cross-section.

Sampling Ports

Port location

The optimum location of sampling ports is at least eight stack diameters downstream of any bends, inlets, constrictions, abatement equipment, straightening vanes, or other flow disturbance; and at least two stack

diameters upstream of the stack exit or other flow disturbance. Hydraulic diameter is used for non-circular stacks and is defined later in this chapter. This location permits a sample traverse to be taken using a minimum of twelve sampling points. A greater number of sampling points is necessary on stacks which fail to meet this location criteria. For a valid sample traverse to be obtained, however, sampling ports must be located at least two stack diameters downstream and at least one-half stack diameter upstream from any disturbance. If a 2-1/2 diameter length of uniform undisturbed stack cross-section is not available, stack modification must be made or an alternate sampling location must be chosen which will satisfy this criteria.

To minimize the increase in the number of sampling points required on stacks with undisturbed cross-section less than 10 but greater than 2-1/2 stack diameters in length, the sampling ports should be located such that the distance from the ports to the nearest upstream disturbance is four times the distance from the ports to the nearest downstream disturbance (see Figure 2-3 for minimum number of sampling points required). The 2-1/2 diameter criteria must be met; the 4:1 distance ratio is a recommendation.

Port Size

Ports are minimum three-inch ID standard industrial flanged pipe with six-inch bolt circle diameter and closed by a removable blind flange. Larger port sizes are necessary on large diameter, double-walled stacks which necessitate longer ports. These ports should also be standard industrial flanged pipe. Ports no smaller than four inches inside diameter must be provided on stacks greater than ten feet in diameter.

Port Installation

Ports shall be installed flush with the interior stack wall and shall extend outward from the exterior stack wall no less than three inches nor more than eight inches unless additional length is required for gate valves. Gate valves should be installed only when extreme stack conditions and/or the presence of hazardous materials require such devices for the safety of personnel. Ports shall be installed no less than five feet nor more than six feet above the floor of the platform and the clearance zone described later in this chapter must be maintained.

Number and Location of Ports on Circular Stacks

A minimum of two ports shall be installed on diameters 90° apart if the stack diameter plus one port length (stack inside wall to end of port extension) is less than ten feet. Four ports shall be installed on diameters 90° apart if the stack diameter plus one port length is equal to or greater than ten feet.

Number and Location of Ports on Non-Circular Stacks

The same upstream and downstream distance requirements discussed previously apply to non-circular stacks. The hydraulic diameter (four times the area divided by the perimeter) is used in place of the circular diameter. This becomes (2AB)/(A+B) for a rectangular stack, where A and B are the cross-sectional dimensions of the stack. The streamwise location of the sampling ports is determined in the same manner as for circular stacks using the hydraulic diameter. The hydraulic diameter is used only for determining the location of sampling ports and the required number of sampling points. Hydraulic diameter is not used in data reduction.

The cross-stream location of the sampling ports is dependent upon the total number of sampling points required. Figure 2-3 is used to determine the required minimum number of sampling points by reading the curve corresponding to the number of upstream hydraulic diameters (B) and downstream hydraulic diameters (A) and selecting the higher number.

The stack cross-section of square or rectangular stacks is divided into a matrix (i,j) of equal area rectangles such that $i = j$ or $i = j \pm 1$ and $i + j$ is equal to or greater than the total number of sampling points required. The number of sampling ports required is either i or j located along one side of the stack such that the centerline of each port is colinear with the centroid of each row of sampling points.

Stacks with cross-sections which are not circular or rectangular must be equipped with an adequate arrangement of sampling ports so that the stack cross-section may be divided into a sufficient number of area increments for a representative sample. If equal area increments are not possible, time weighting of the sample at the various sampling points may be necessary. Detailed plans of such installations should receive advance approval by the TACB.

Monorail Support Structure

The installation of a permanent monorail support structure is recommended to reduce set-up time and to eliminate the load-bearing requirements for the sampling ports. Figure 2-1 shows a drawing of the monorail support structure including the relative position of the bracket to the sampling port. This bracket is intended to be compatible with several types of sampling equipment. The loading requirements for ports or the monorail support structure are shown below.

Port or Monorail Support Loading

The port or monorail support installation shall be capable of supporting the following loads:

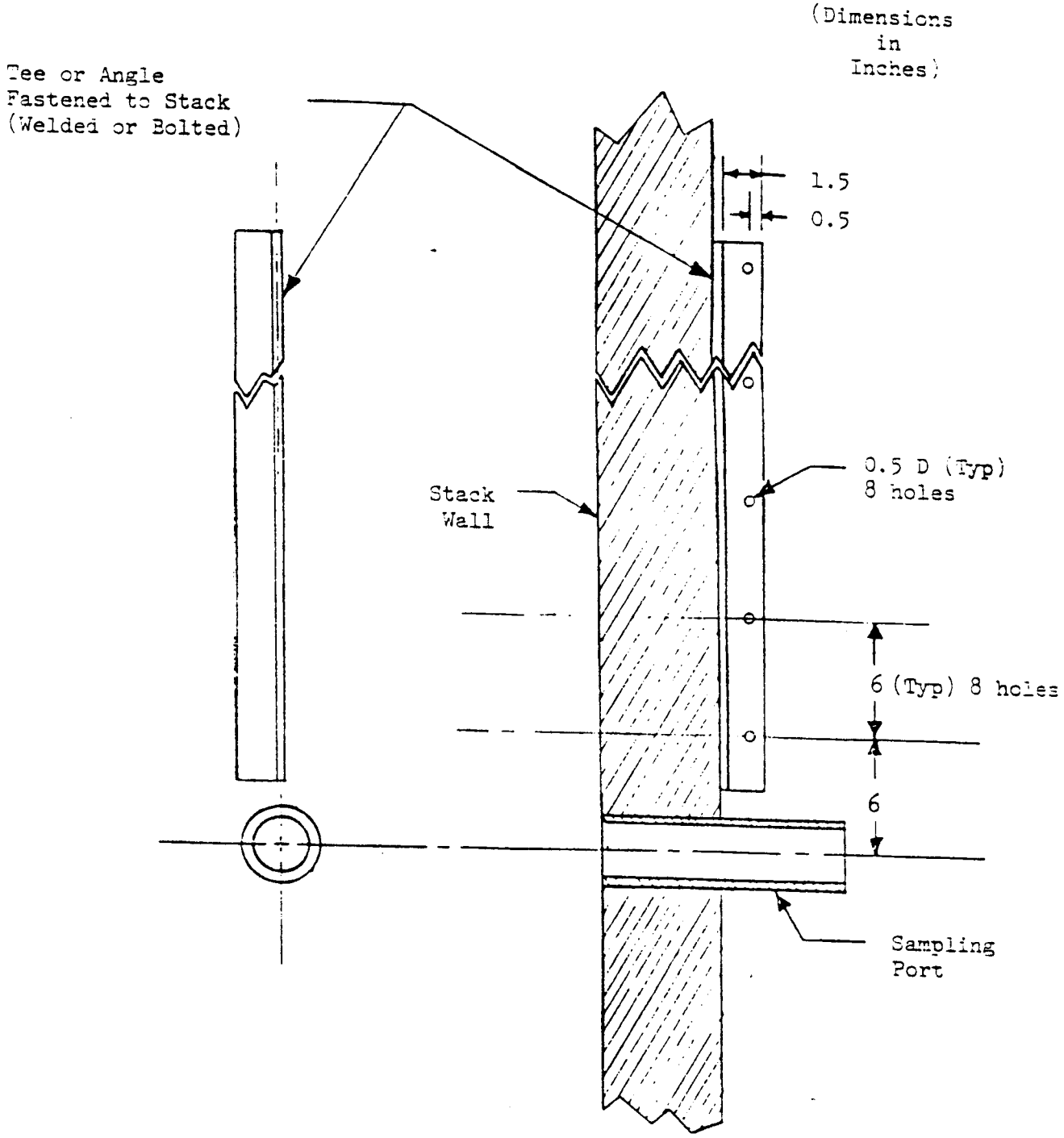


Figure 2-1

Monorail Support

- Vertical load of 200 pounds
- Horizontal load of 200 pounds
- Radial load of 1000 pounds (along stack diameter)

Work Platform

A work platform shall be provided around the stack circumference between the sampling ports and extending at least three feet beyond each port. If four ports are required, the work platform shall extend around the entire circumference of the stack. The minimum platform width shall be at least three feet measured radially with stack diameter. The work platform must be capable of supporting at least 2000 pounds.

Safe and easy access to the work platform shall be provided via ladder, stairway,or other suitable means. Safe guardrails shall be provided around the platform. Angular rather than round rail members should be used if possible. No open ladder well, stairwell, or other such opening shall be located within three feet of any sampling port. Ladder wells shall be covered at the platform and any opening to the platform shall be equipped with a safety bar or chain at the opening.

A temporary work platform for sampling operations is acceptable if proper safety and accessibility is provided. All other requirements detailed in this chapter such as for monorails, ports, loading, clearance, and power must be met by the temporary facilities.

Clearance Zone

A three-dimensional obstruction-free clearance zone shall be provided around each sampling port. The zone shall extend one foot above the port, two feet below the port, and two feet to either side of the port. The zone shall extend outward from the exterior wall of the stack at least one stack diameter (or stack radius if four ports are provided), plus one port length (inside wall to end of port extension) plus three feet. Although this clearance zone is adequate for TACB sampling equipment, sampling contractors may have other clearance needs. The clearance zone is illustrated in Figure 2-2.

Power Supply

Electrical power outlets shall be provided as follows:

Platform

One 115-volt, 15-amp, single phase, 60 hertz alternating current circuit with a grounded two-receptacle weather-proof outlet. Receptacles shall accept standard three-prong grounded household-type plugs or suitable adapters shall be provided.

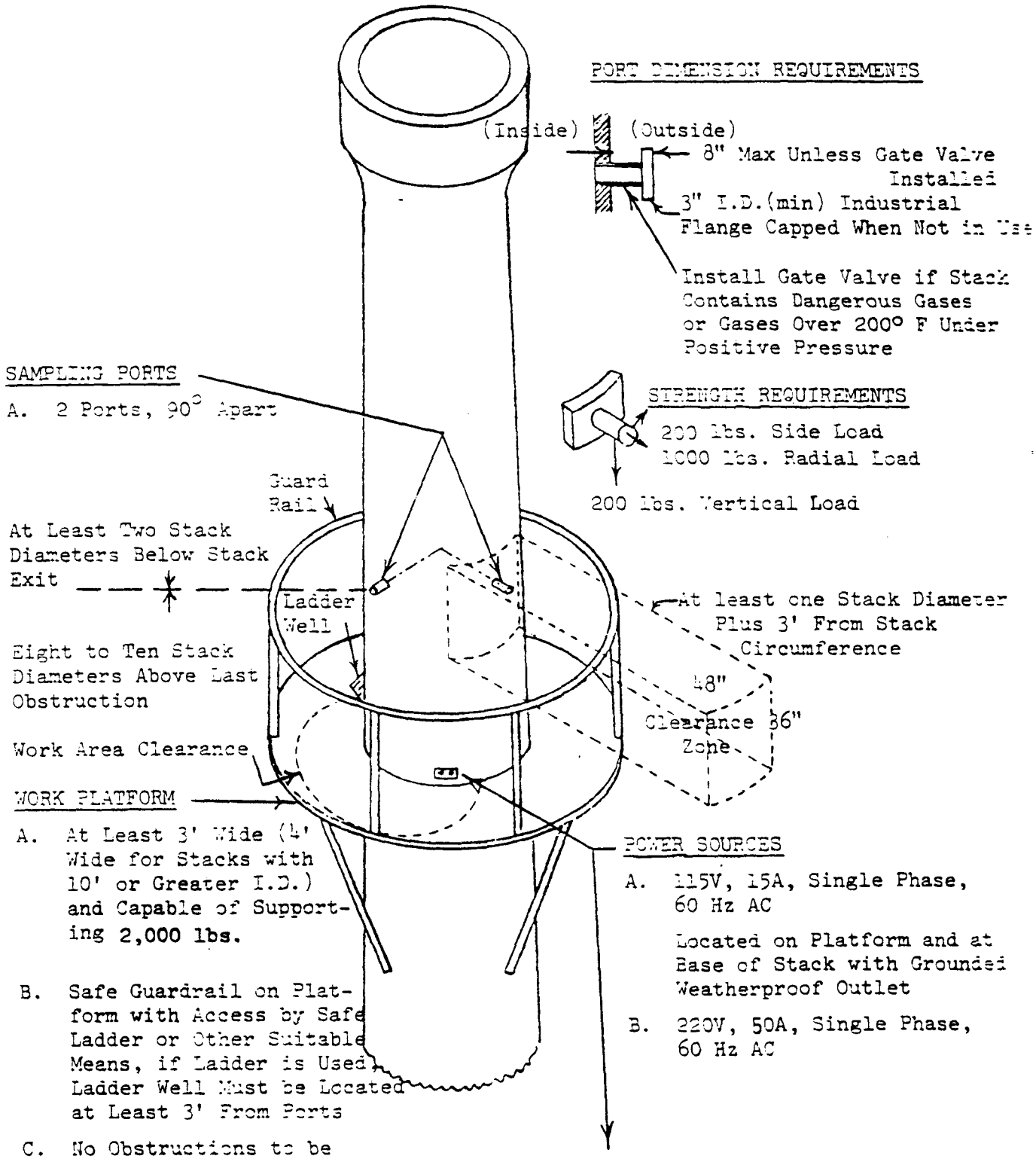


Figure 2-2

Stack Facilities

Stack Base

Two 115-volt, 15-amp, single phase 60 hertz alternating current circuits with grounded two-receptacle weather-proof outlets. Receptacles shall accept standard three-prong grounded household-type plugs or suitable adapters shall be provided.

One 220-volt, 50-amp, single phase alternating current circuit with standard 50-amp plug or suitable adapters capable of being wired to TACB power cord.

Vehicle Access and Parking

The stack sampling will be coordinated and controlled from a van or trailer parked near the base of the stack for the duration of the sampling except for situations in which sampling operations must be conducted from a rooftop or other location. Vehicle access and parking space must be provided since various umbilical, communications, and equipment transport lines will be strung from the van or trailer to the stack platform and will remain in position throughout the sampling period.

Gaseous Sampling - Concentration Only

Standard sampling ports and platforms are normally necessary for gaseous sampling because a velocity traverse is needed for flow rate determination in most cases. In sampling situations for which only pollutant concentration is needed or for which an accurate flow rate is available by other approved means, less elaborate sampling facilities may be acceptable. All facilities must, however, meet strength and safety requirements.

Gaseous sampling facilities for concentration only shall be sufficient for collection of a sample of stack gas according to standard gaseous sampling procedures. Adequate minimum facilities such as a one inch nipple shall be installed in the stack at a location where sufficient turbulence exists (no stratification) to insure a representative sample. Proper clearance must be provided for sampling operations or a permanent probe and sample line can be installed at the port location and extended to a more accessible sampling location. The probe and sample line must be installed so that leak checks can be made.

Permanent Monorail Systems

Source operators are encouraged to install permanent monorail systems on large stacks. Monorails must extend the full radial length of the clearance zone described previously, and must be capable of supporting a 200 pound load anywhere along the monorail track. Rollers must be properly lubricated and maintained in working condition. The sample box attachment hooks should be six inches above the port centerline. If the

monorail is installed with the hooks more than six inches above the port centerline, suitable adapters must be provided.

Miscellaneous Requirements

In addition to the specific requirements detailed in this chapter, other miscellaneous requirements are as follows:

- Power hoists shall be provided for sampling platforms 200 feet or more above ground level.
- Non-circular horizontal ducts should have provisions for vertical sampling. Circular horizontal ducts should have one vertical and one horizontal port. Suitable work platforms are necessary in both cases.
- Heat insulation shall be installed as necessary on high temperature stacks for safety in the vicinity of the work platform.
- The source operator is responsible for maintaining all sampling facilities in safe, useable condition at all times.

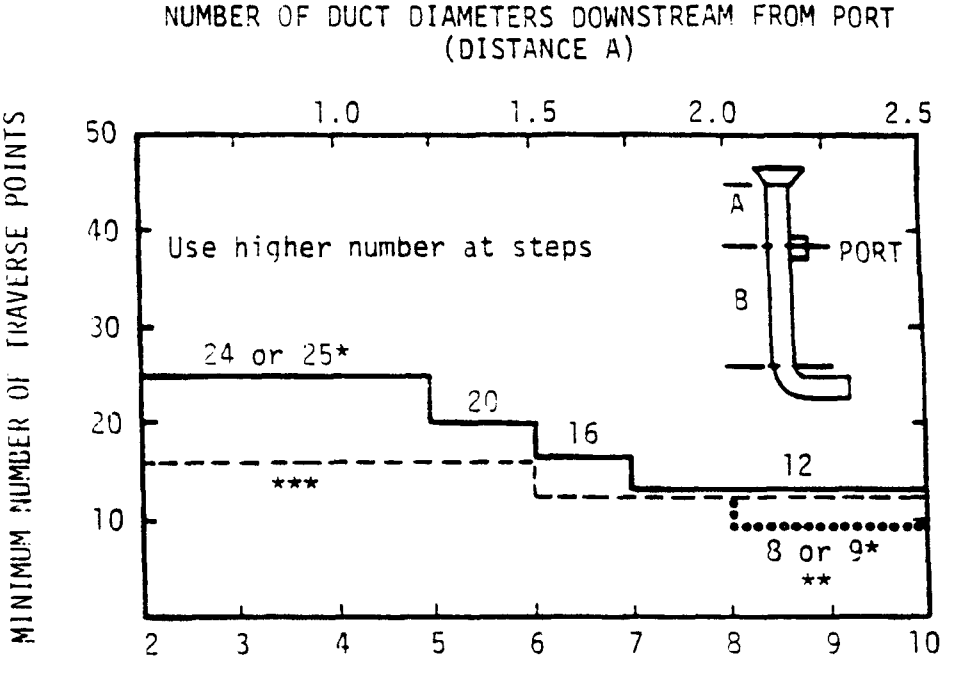
Excess Air

Additional facilities may be necessary for determining the composition and flow rates of feed stock and fuel on certain processes such as incinerators. This information, obtained at the time of sampling, is necessary to calculate the amount of air in the stack effluent in excess of stoichiometric.

Cyclonic Flow

Cyclonic or swirling flow may be encountered in a stack or duct due to certain circumstances such as cyclone collectors or tangential duct entry. Corrective measures such as straightening vanes may be necessary to alleviate the cyclonic condition.

The existence of cyclonic flow may be determined as described in Chapter 4. A method for sampling cyclonic flow is described in Appendix H, but advance approval should be obtained concerning its applicability for determining compliance status.



*Higher number is for rectangular stacks or ducts.
**Dotted line is for stack diameter of one through two feet (particulate and velocity traverses).
***Dashed line is for velocity traverses only (gaseous sampling).

Figure 2-3

Minimum Number of Traverse Points

PART A
QUESTION NO. 1

ANNUAL REPORT
2001

Contents

Managing Partners'

Edouard Michelin
François Michelin
René Zingraff

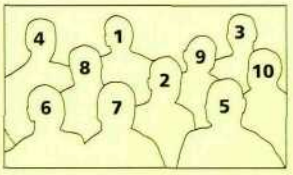
** Mandates and functions exercised in other Companies: see p. 58*

General Partners

Edouard Michelin
François Michelin
René Zingraff
Société Auxiliaire de Gestion SAGES

Group Executive Board

1 • Michel Caron	*Quality, Aircraft, 2 Wheels*
2 • Thierry Coudurier	*Europe, Euromaster*
3 • Hervé Coyco	*Passenger Car - Light Truck*
4 • René Fontès	*Earthmovers, South America*
S • Jim Micali	*North America, TCI*
6 • Didier Miraton	*Technology Center*
7 • Jean Moreau	*Personnel*
8 • Michel Rollier	*Finances, Agricultural*
9 • Christian Tschann	*Pacific Asia*
10 • Bernard Vasdeboncoeur	*Truck, Africa/Middle East*



Supervisory Board

Eric Bourdais de Charbonnière
Chairman
Member of the Supervisory Board of Oddo & Cie

François Grappotte
Chief Executive Officer of Legrand
Member of the Board - France Telecom and BNP Paribas
Member of the Banque de France Advisory Board

Pierre Michelin
Division Manager - Bull Group

Grégoire **Puiseux**
Member of the Supervisory Board of
Manufacture Fran^aise des Pneumatiques Michelin
Financial Controller - Compagnie Financière Michelin

Edouard de Royère
Honorary Chairman and Member of the Board - Air Liquide SA
Member of the Board - Danone, L'Oréal, Sodexho Alliance,
Sodexho Marriott Services Inc, Solvay, Fimalac and Wanadoo
Chairman of the Association Nationale des Sociétés par Action
(AfJSA - Joint Stock Company Association)

Statutory Auditors

Stéphane Marie, *auditor**
Dominique Paul, *auditor***
Jacques Zaks, *assistant of Mr. Marie**
Pierre Dufils, *assistant of Mr. Paul***

'Associate of Corevise
***Associate of Befec - Price Waterhouse*

Contribute
to the progress of mobility

Throughout the world, development is based on the freedom of circulation of people, goods and services.

The rapid expansion of road transport and the rise in the number of cars on the road is coupled with a quality-oriented evolution in mobility, which offers our Group opportunities for growth and new performance. In the future there will be many more vehicles but they will be safer, have greater driver/vehicle interaction and be more environment-friendly.

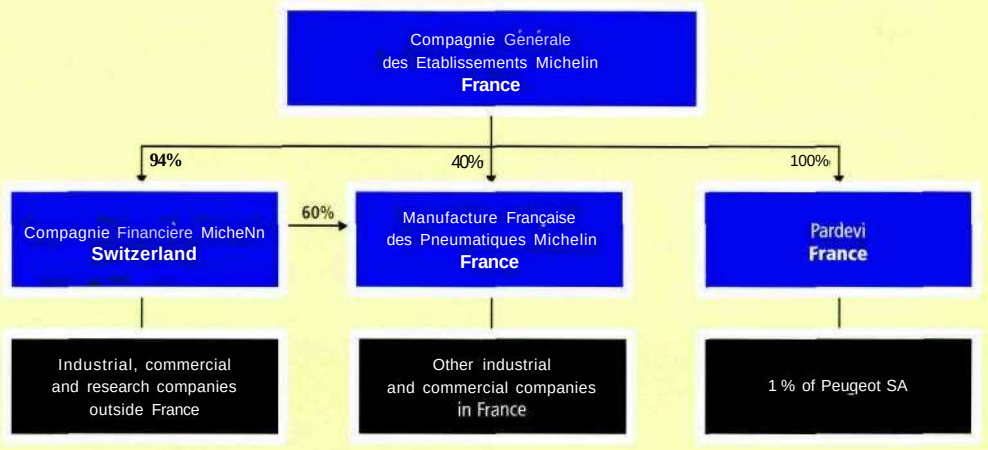
Daring to be different, with a pioneering spirit and increased commitment: our staff are the driving force behind our success

The essence of our strategy is to contribute to the progress of mobility.
Michelin intends to remain the undisputed leader in the tire industry by means of:

- its strong capacity for innovation,
- the high performance of its products and services,
- the power of its brands,
- the quality of its results,
- its contribution to lasting development,
- the development of new services for users.

By helping mobility to progress, Michelin is contributing significantly to improved safety, higher performance and greater driving pleasure.

Simplified legal organization chart



The tire.

a high-tech product

A tire is a complex product, combining about twenty intermediate components made up of 200 different materials or products.

Functions

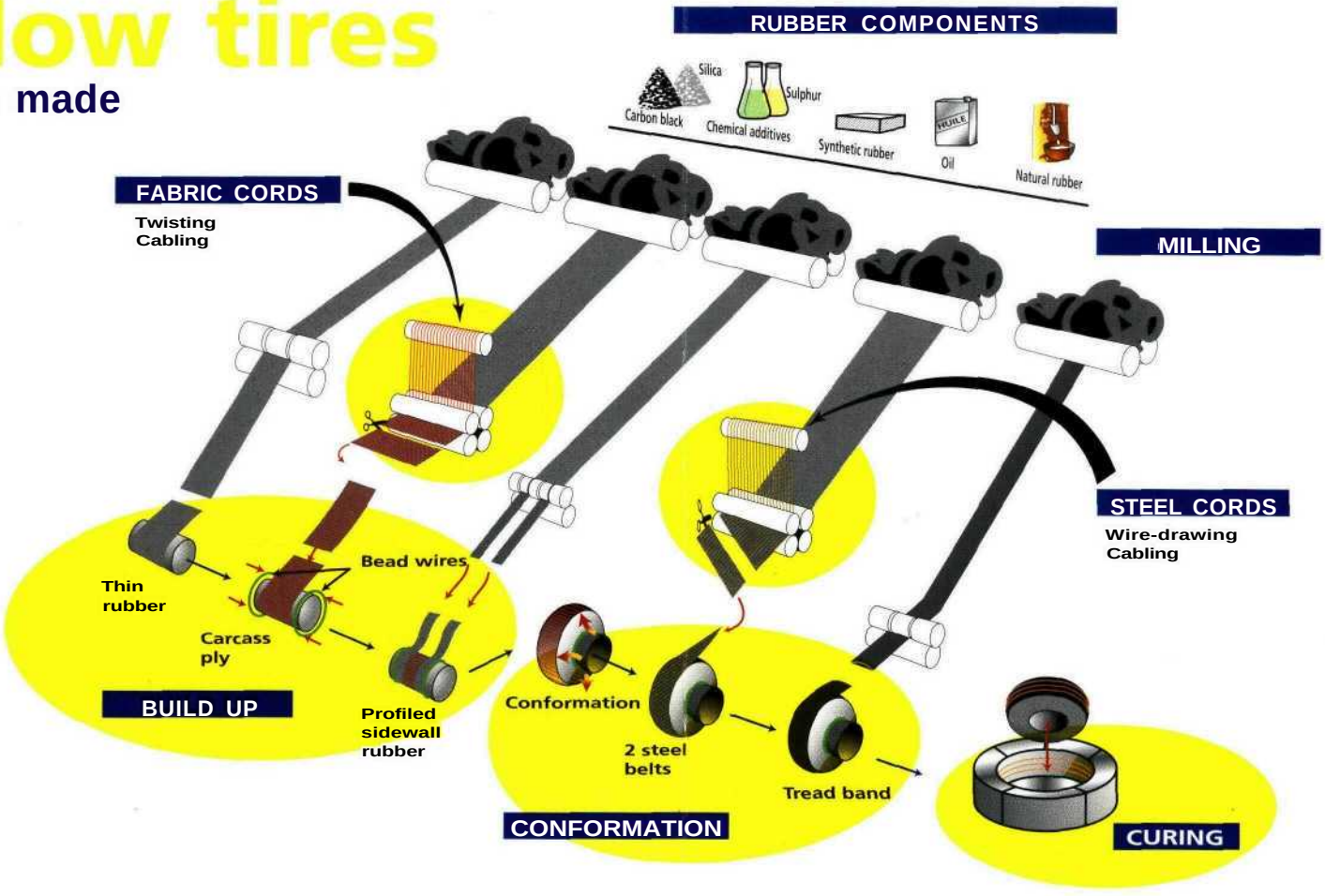
- **Supporting** the entire weight of the vehicle.
- **Transmitting** traction and braking torques.
- **Steering** the vehicle under any road conditions and with any driving style.
- Absorbing impacts and bumps in the road.
- **Running on** all road surfaces, in any weather and in any climate, with the lowest possible fuel consumption.
- Fulfilling its functions **for as long as possible.**

Performance characteristics

Grip, road handling, low vibration and noise levels, endurance, durability, smooth running.

The tire manufacturer's art lies in striking **a balance between these frequently contradictory performance characteristics** in order to satisfy its customers' requirements in terms of safety, driving pleasure, reduced cost of use and environmental protection.

How tires are made



The tire: a highly functional structure

1. **Tread**
   A thick layer of rubber provides contact with the ground. It has to channel water away and last as long as possible.

2. **Crown plies**
   This double or triple reinforced belt has both vertical flexibility and high lateral rigidity. It provides the steering power.

3. **Sidewalls**
   These cover and protect the textile casing whose role is to attach the tire tread to the wheel rim.

4. **Bead area for attachment to the rim**
   Its internal bead wire clamps the tire firmly against the wheel rim so that they are joined together.

5. **Inner liner**
   This makes the tire almost totally impermeable and maintains the correct inflation pressure.

Ensuring
long-term driving safety

1 Regularly
check the inflation pressure

Your tires' contribution to your safety depends first and foremost on maintaining the correct inflation pressure.

As this pressure naturally decreases over time, it should be checked at least **once a month.** Do this when the tires are cold, as there is spontaneous overpressure in "hot" tires.

2 Check
for impacts and tire wear

- Tire **sidewalls should always be checked** after an impact. A bulge indicates a weak spot that could deteriorate quickly. In this case, ask a specialist for advice.
- When the tread profile is only **1.7 mm deep,** the tire must be replaced as it no longer has sufficient grip on wet roads. To make this clearly visible, the tread is equipped with a set of 6 or 7 wear bars that appear across the tread of the tire when it needs to be replaced.
- If tread wear is uneven, **check the alignment** of the axle concerned.

3 Ensure
correct wheel balancing

A fitted tire can become unbalanced. This produces **vibrations** in the steering and the floor that may eventually lead to free play in the steering. In this case, have the wheels balanced as soon as possible.

4 Adapt
to winter conditions

Low temperatures tend to make the tread rigid on ordinary tires, reducing their grip on slippery surfaces. If you frequently drive in cold, rainy weather or on black ice or snow, it would be a good idea **to fit special tires.**

Winter tires use special types of rubber and tread patterns equipped with sipes which provide excellent grip.

5 What Should I do if I have a flat tire?

If you *are* not yet equipped with PAX System, you should slow down as soon as possible, turn on your warning lights and park at a safe distance from the traffic to change the tire.

- Once the handbrake is on and the passengers are safe, well away from the traffic, wedge one of the wheels and unlock the flat tire by loosening its nuts by one turn, before jacking up the vehicle.
- Once the vehicle has been jacked up, remove the nuts and the flat tire, then fit the spare tire, though without fully tightening the nuts.
- When the vehicle has been lowered again, tighten the nuts and continue your journey... carefully.

Michelin is one of the world leaders with a 19% share of the tire market

The Group is in pole position on every continent and all tire and mobility-related service markets. It is the acknowledged leader, ahead of the field on the most challenging technical segments.

Michelin's development is based on innovation

and a high level of quality offered to automotive manufacturers, distributors and drivers. The Group's policy is to adapt closely to the requirements of each market; it is backed by a unique portfolio of complementary brands, able to satisfy the requirements of every customer with a wide range of performance levels and prices.

The Group's medium-term objectives

- to achieve a 10% operating margin by 2005,
- to outperform market growth by at least 2% in the most buoyant segments,
- to achieve a more balance spread of business across geographic markets, by developing sales in regions with high-growth potential such as Asia, South America and Central and Eastern Europe.

Message from Edouard Michelin

Madam, Sir, Dear Stockholder,

The year 2001 was marked by substantial progress in our global, profitable and sustainable growth strategy. I wish to underline 3 elements that are of particular significance:

- Michelin has become N0.1 in China,
- 2001 was an outstanding year for our Group in the field of innovation,
- our operating margin is 6.6%.

What is at the very heart of this dynamic?
Our teams of course!

Our teams around the world have put their passion for excellence at the service of the durable and structural improvement of the Group, while still striving to give the utmost satisfaction to our customers.

In order for our employees to be more fully associated with the life of the Company, we will be launching worldwide Employee Shareholding Plans and Stock Option Plans that will start in the spring of 2002.

A pioneering spirit, stamina, a sense of teamwork : these values are also at the root of our successful return to F1 and of the wealth of medals captured in all the motorsport disciplines in which we are involved!

Strengthening in Europe and in North America - Development in the new markets.

Despite the reversal of the economic situation, the first signs of which appeared in the United States as early as the second half of 2000 and was further accentuated by the tragic events of September 11, Michelin was able to hold the course and master a delicate environment with a sense of both anticipation and reactivity.

In Europe and in North America, Michelin has strengthened its positions on the replacement markets and on all segments with added value. The effort was pursued in Eastern Europe in order to take advantage of local growth and to guarantee, in the long run, our positions in a widened Europe.
This is the reason why we have acquired Tofan, the leading tire manufacturer in Romania.

In Asia, our expansion is particularly spectacular in China thanks to the creation of a joint-stock company with the NO.1 tire manufacturer in China, Shanghai Tire and Rubber Company, in which Michelin holds 70% of the capital.
Our position now enables us to accompany the growth of an up-and-coming automobile market.
In South America, our growth has remained substantial, despite the economic difficulties encountered in this zone.

Innovation.

Along with the ongoing quest for quality, innovation is at the heart of our strategy.

In 2001, this was given concrete expression through a series of "firsts", very important for our future growth:

- the first standard vehicle equipped with PAX System,
- the launch of a new axle system, the Optimized Contact Patch system, that will revolutionize the dynamics of vehicles and the performance of tires,
- the Air X NZG tire for Concorde, the innovations of which will be extended to other aircraft,
- the partnership agreement with Bosch in the area of the optimization of the coupling of tires and electronic vehicle control,
- the launching of a full set of online mobility assistance services with ViaMichelin, the development of Michelin Fleet Solutions services to vehicle fleets and the commercial distribution of snow chains, the very first Michelin licensed products.

Through its ongoing efforts in research that do not compromise its financial balance, Michelin invests in the future.

Profitable growth in a difficult context

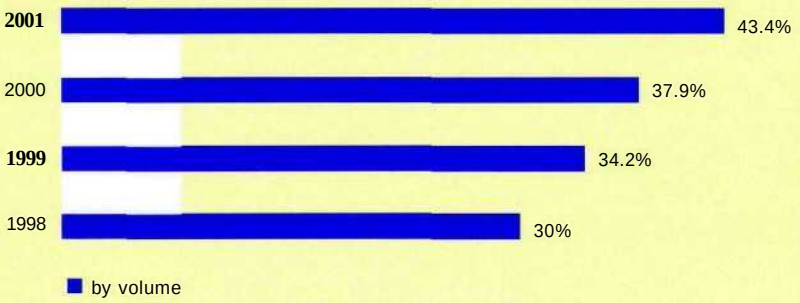
With an operating margin at 6.6%, above that of our competitors as well as one of the best results in the automobile industry as a whole, Michelin has achieved a good performance. This result stems from a targeted growth on the most profitable and buoyant markets in the field of passenger vehicles and professional applications. This also stems from the will to restore value to a technically advanced product, essential to safety. Finally, this also conveys a strict management of our financing needs, especially as far as inventories are concerned.
Michelin has also proven its ability to face difficult times without a significant drop in results, and to strengthen its leadership.

This good performance was achieved thanks to cautious management and risk appraisal which has always accompanied Michelin's development.

We trust that both our teams and our strategy will confirm in the long term the guality of our performances in 2001. Your Company has given itself the means to lead the race in the sector of mobility.

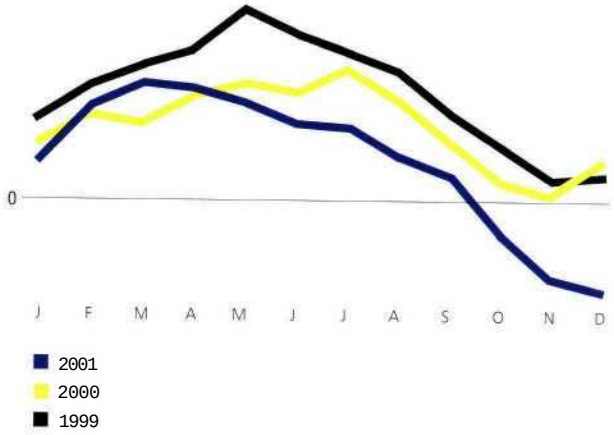
Thank you for your trust. I would also like to mention that, at the time of the General Meeting in May 2002, the functions of my father, Mr. François Michelin, as Managing Partner will come to an end. Without saying too much at this point about this important moment..., for 50 years, what a contribution, what passion!

Edouard Michelin



Percentage of top-range tires in Passenger Car Light Truck sales

As a result of its focused growth strategy, Michelin is making rapid progress on the most dynamic and profitable segments: high performance tires (VZ indices), performance (H index) and tires for 4x4s or SUVs (Sport Utility Vehicles).

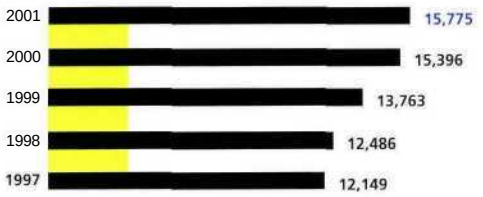


Change in finished product inventories(atcost)*antons)*

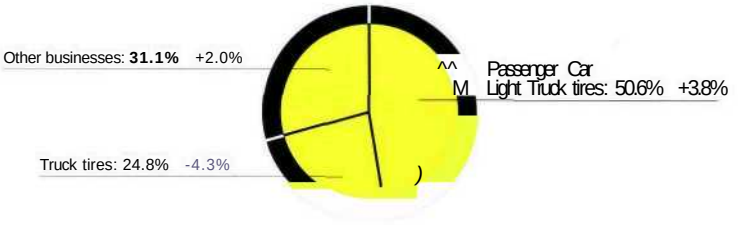
Despite more difficult market conditions, the Group improved its control over finished product inventories, which declined by more than 8% excluding the effect of exchange rate changes. At 20.9% of sales compared with 23.2% the previous year, this was the result of improved responsiveness in the procurement chain and the Group's capacity to anticipate and adapt swiftly to changing markets.

Good resistance in a difficult environment

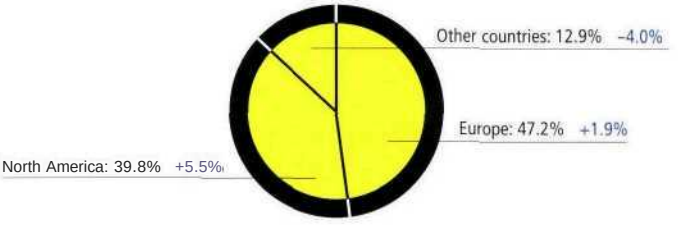
Growth still outstripping market expansion



Consolidated sales +2,5%
in millions of euros



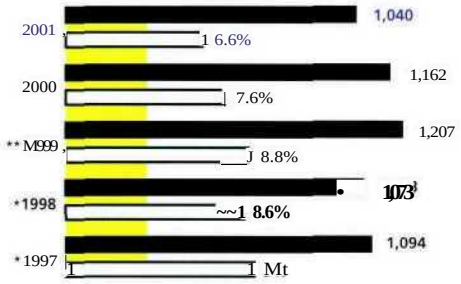
2001 sales *1s*
by business segment



2001 sales
by geographical area

Although volumes dipped 2.8%, net sales rose by 2.5% thanks to a well-targeted growth strategy and a pricing policy designed to protect margins.
70% of sales were achieved on the non-cyclical replacement market.
The rise in sales exceeded the growth on the world tire market.

Limited reduction in the operating margin



Consolidated operating income -10.5%
in millions of euros

* Previous accounting methods
** Pro forma.

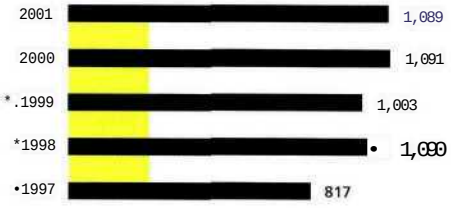
- Total
- Operating margin

Operating margin by business segment

- Passenger Car-Light Truck tires
- Truck tires
- Other businesses

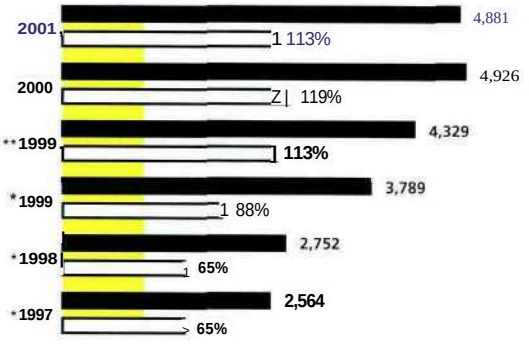
In an environment marked by a sharp deterioration in the North American market and a rise in the prices of raw materials, operating margin declined by only 1 point, reflecting improvements in the product mix and a pricing policy designed to protect margins.
This operating margin is one of the best in the tire industry.

Improved financial condition



Net capital expenditure -0.2%
in millions of euros

* Previous accounting methods.
** Pro forma



Net debt
in mi/lions of euros

* Previous accounting methods
** Pro forma

- Total
- Debt-to-equity ratio

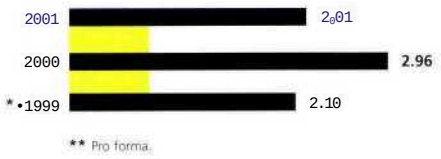
Michelin pursued a selective investment policy.
The Group applied part of the capital gain on the sale of 2.8% of Peugeot SA to reducing its debt position.
23% of debt is repayable beyond 5 years.
Interest cover (Operating income/net interest expense) stood at 3.3x.

Michelin's share performance

Euronext Paris Premier Marché (first market) Deferred Payment Service
Sicovam / EUROCLEAR Code: 12 126
ISIN Code: FR 0000121261
Indices: CAC 40 - Eurostoxx 100
Par value: 2 €
Minimum tradable number of shares: 1
Average daily trading volume: 578,980
Market capitalization on 31.12.2001: € 5.0 bn

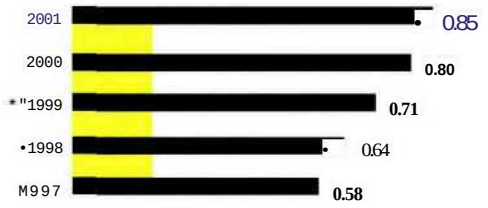
Published earnings per share

in euros



Net dividend per share excluding tax credit

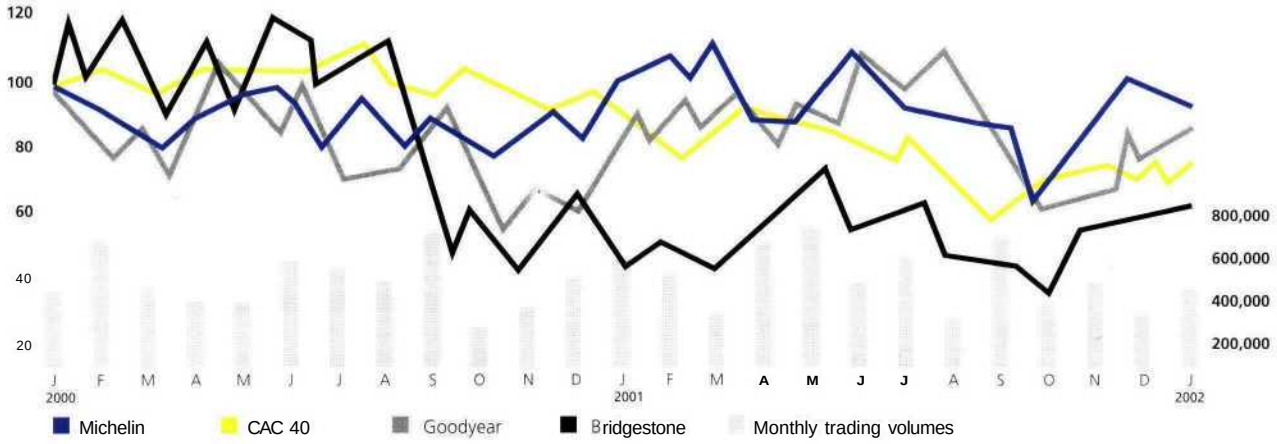
in euros



* Previous accounting methods
** Pro forma.

For the last 5 years, Michelin has pursued a policy of regularly increasing its dividend.

Share performance



Monthly trading volumes *from January 2000 to February 2002*

in euros

	2001	2000	1999	1998	1997
High	43.50	41.90	49.49	62.34	61.42
Low	25.84	30.10	30.30	28.51	41.89
Year-end price	37.05	38.55	39.00	34.07	46.19
Market capitalization as of 31.12 in billions	4.99	5.19	5.25	4.59	6.32
Average daily trading volume	578,980	514,485	561,436	561,933	545,646
Number of shares	134,715,873	134,715,873	134,715,873	137,715,893	136,892,968
Par value	2	2	2	2	2

Shareholder Ownership structure *as of 31.12.2001*

Treasury stock	3.1%
Employees	0.2%
French institutions	25.0%
Franklin Templeton	6.6%
Other foreign institutions	44.1%
Individual shareholders	21.0%

Michelin share price in 2001

Michelin enjoys genuine competitive advantages on fundamentally sound, buoyant markets. Moreover, the Group possesses the necessary human, technological, industrial and financial resources to achieve its growth and profitability objectives. This is undoubtedly why the Michelin share price has stood firm compared to the indices and its main competitors.

Thanks to its clear-cut strategy, there are signs that the Group's fundamentals are starting to be taken into account. Capital previously invested in TMT stocks is moving back to industrial companies such as Michelin, which offer greater visibility. Continued market volatility is penalizing long-term investors, however.

Shareholder information

Michelin endeavors to establish positive relationships with its shareholders, based on trust and transparency, by keeping them fully and speedily informed.

In 2 years, close off times have been reduced by 3 weeks and the Group now publishes its annual results less than 2 months after the end of the financial year.

Since all the shares are registered stock, Michelin is able to keep all shareholders directly informed. Information resources include the Letter to Stockholders, published 3 times a year, a full Annual Report and an Internet site updated on a daily basis: www.michelin.com.

In 2001, Michelin took part in the ACTIONARIA convention in Paris for the 4th year running and arranged 3 meetings, in Paris, Lyon and Lille, to meet shareholders personally

The Annual General Meeting of Shareholders was held for the first time at the Ladoux Technology Center. This gave around 800 shareholders an opportunity to attend demonstrations of the technical performance of the Company's products on the test tracks.

At the same time, over 150 meetings and "one-to-ones" organized in 13 different countries enabled the Group to hold direct discussions with 340 analysts and institutional investors. As in 1999 and 2000, seminars held in Europe and the United States gave around fifty analysts and investors further insight into the Group's strategy, particularly regarding top-range Passenger Car and Truck tires. It also gave Michelin an opportunity to present C3M and the major role that this revolutionary process is scheduled to play in the Group's strategy.

A dividend up 6.2%

At the Annual General Meeting on May 17, 2002, the Managing Partners will be proposing the distribution of a net dividend of 1.28 euro, including the tax credit, an increase of 6.2% on the previous year and up 47% over the past 5 years. The dividend will be payable as from May 22, 2002, i.e. 2 business days after the Meeting.

Financial calendar (1)

Shareholder Annual General Meeting	May 17, 2002
Payment of proposed dividend	May 22, 2002
Announcement of 1st quarter 2002 net sales	April 24, 2002
Announcement of 2002 half-year results	July 30, 2002
Announcement of 3rd quarter 2002 net sales	October 24, 2002
Announcement of 2002 net sales	February 5, 2003
Announcement of 2002 results	date to be announced

(1) These dates may be subject to change.

Highlights

© Commercial facilities in over **170 Countries**

36,200 products marketed

© **Production Sites** within the markets

Close to 80 production sites in 18 different countries with a daily output of

- **844,000 tires**
- **61,000 inner tubes**
- **96,000 wheels**
- **70,000 maps and guides**

© Highly-qualified **Staff**

Around 130,000 employees of many cultural origins, including 4,000 research staff based in Technology Centers in Europe, the United States and Japan.

© **A passion** for automobiles

Over 120 World Driver and Constructor Championship titles since 1973.

2001 brought:

- **4 Formula 1 wins in the first year**
- **World Rally Championship (constructors)**
- **SOOcc Motorbike World Championship**
- **Superbike World Championship**
- **Victory at the Le Mans 24-Hour Race**
- **Victory in the Dakar rally in 3 vehicle categories**

© **A superb portfolio of brands**

covering all market segments

MICHELIN BFGtntMcH KteBir 1UMROYAL

R/REN ^TAURUS ^"""M eSMMTVRE S,COLLAMTAS

RREUROMASTER W I iiji RE/AMIC Encore

A leader on the world tire market

market share

O Tires for every type of vehicle

- **Passenger cars and light trucks**
- **Trucks**
- **Agricultural vehicles**
- **Earthmovers and handling equipment**
- **Aircraft**
- **Two-wheelers**

© Road-holding systems

in partnership with Woco,
Vallourec Composants Automobiles, Toyo AVS, Bosch, etc.

0 Integrated distribution and services **networks**

- **Euromaster in Europe**
- **Tire Centers LLC in the United States**

O Mobility assistance **Services**

- **Michelin maps and guides**
- **Michelin Euro Assist assistance services**
- **Michelin Fleet Solutions**
- **ViaMichelin electronic services**
- **Tire Advisor**

Highlights of the Michelin Group

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0 A superb portfolio of brands

covering all market segments

MICHELIN BFGoodrfch KtelSlr aUMROYALW

RfREN fftTCtURUS ^TM tmOtan eSMUOTVRE BtCOLLANTAS

EUROMASTER "M RE AM IC

A leader on the world tire market

19% market share

0 **Tires** for every type of vehicle

- Passenger cars and light trucks
- Trucks
- Agricultural vehicles
- Earthmovers and handling equipment
- Aircraft
- Two-wheelers

© **Road-holding systems**

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© Integrated distribution and services networks

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O **Mobility assistance Services**

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- Michelin Euro Assist assistance services
- Michelin Fleet Solutions
- ViaMichelin electronic services
- Tire Advisor

2001:

Michelin moves ahead

Developments

Michelin - the leader in China...

The Group has taken a 70% stake in a joint company set up with Shanghai Tire and Rubber (STRC), China's No. 1 tire manufacturer. Shanghai Michelin Warrior Tire Co.,Ltd. has acquired from STRC the resources to produce radial Passenger Car and Light Truck tires. It produces tires for the Chinese market and exports under the Warrior and Michelin brands. Michelin has been present in China for nearly 4 years now and is the leader on the Chinese market for radial passenger car tires.

...and in Romania

The Group has acquired two plants producing radial tires for Passenger Cars/Light Trucks and Trucks from Tofan, the No. 1 Romanian manufacturer. Included in the deal are around twenty storage and distribution centers and the Automaxima franchise with 2,000 sales outlets. Michelin is now the leader in Romania with over half the market and is thus expanding its resources to serve buoyant markets in Central and Eastern Europe.

PAX System
becomes the standard

Michelin and Sumitomo Rubber Industries have signed a license agreement for the development and sale of PAX System in Japan and Asia. PAX System offers a high level of performance and ride comfort and low rolling resistance, while enabling a vehicle to drive safely at 80 kph for 200 km after a puncture.
With the agreements already signed with Goodyear and Pirelli, the promotion of PAX System is now backed by four manufacturers which together represent 48% of the world original equipment market.

ViaMichelin
recognized as a major player in mobility assistance services

The Group has launched a full set of mobility assistance services for individuals and companies under the name ViaMichelin. Maps, traffic, weather and tourist information are available on the Internet, Minitel, CDRoms, GSM, WAP and PDA. The free-access site viamichelin.com launched in 2001 has been a genuine success with close to 3 million visits per month.
Its European deployment has begun, with the establishment of affiliates in Germany and the United Kingdom, soon to be followed by Spain and Italy.

Innovations

Launch of the Optimized Contact Patch system

Entirely designed by Michelin, this new axle system optimizes the tire contact patch, particularly when cornering. The result: improved safety, longer tire life and excellent driving comfort for the vehicles of tomorrow.

Development at record speed for Concorde

At the request of EADS, Michelin developed its latest version of radial technology for aircraft in just 8 months: the AIR X NZG (Near Zero Growth). The tire offers remarkable resistance to external aggression and a significant gain in weight - two vital qualities for aeronautics. This innovation will ensure extra safety for air transport in the future.

Partnership with Bosch

Michelin has set up a strategic partnership with Bosch, the brake and stability specialist, to improve safety and mobility by optimizing the coupling of tires and electronic vehicle control technology.

Home servicing

With its new mobile workshop, Euromaster is now able to offer a new service to individual customers: everyday maintenance of their vehicles -tires, brakes, oil-change - at home or on their company parking lot. The objective for France: 30,000 service calls a year.

Performance

Formula 1 victories

After 16 years away from Formula 1, the drivers of Michelin's partner racing teams achieved 11 podium finishes in 17 Grands Prix: Ralf Schumacher and Juan Pablo Montoya with their BMW Williams brought Michelin 4 new Formula 1 victories.

Productivity to the power of 3 with C3M

20 million tires have already been produced using this compact process, which involve a single production phase instead of 7 with the traditional process. This highly flexible process is particularly suited to the production of tires with distinctive performance characteristics. C3M is already accounting for 20% of the Group's production in this segment. The aim is to achieve a 30% gain in productivity.

Stimulating performance by associating the staff with results

The Group has decided to launch a worldwide employee stock ownership plan and a stock option program in 2002. The related share issues were authorized by shareholders at the 2001 Annual Shareholders' Meeting.

Michelin elected top company by managers

Michelin was elected the "top company"in a survey of 1,350 managers conducted by the French economic magazine, "L'Expansion", and the IFOP survey institute. Michelin was the second favorite brand in France according to a survey of 1,000 people by "Capital" magazine and the CSA survey institute.

Transparency

New rating

Standard & Poor's assigned Michelin a BBB+ long- term rating, with a stable outlook, and an A2 short-term rating. Moody's assigned Compagnie Financière Michelin and Manufacture Française de Pneumatiques Michelin a Baa! long-term rating and a P2 short-term rating. These ratings compare favorably with other players in the tire and automotive equipment manufacturing sector.

Open day and information meetings

20,000 people accepted Michelin's invitation to its first "Open Days" in Clermont-Ferrand in June.

In all, around 6,000 private shareholders attended information meetings organized in Paris, Lyon and Lille.

Strategy

Michelin intends to become the undisputed leader in the tire industry and, more generally, in the field of mobility assistance through its capacity for innovation, the quality of its products and services and the impact of its brands.

The Group's objective is to achieve lasting high-performance results by maintaining a higher growth rate than the market on specific attractive segments and by increasing profitability.

With this aim in mind, Michelin's growth strategy is targeted on the most buoyant and rewarding markets. Technology, innovation, marketing, and service: it is endeavoring to make the most of areas where its skills are clearly recognized by its customers.

Sustainable, profitable growth - worldwide

3/4 of Passenger Car-Light Truck tires sold are replacements.

The 4x4, SUV and high-performance replacement tire market alone is equal in value to the total original equipment market, with much higher growth and profitability.

The quality of a Michelin Truck tire CarcaSS, combined with Michelin retreading techniques and services, offers transport professionals the lowest cost per mile.

Asia accounts for 1/3 of the world Truck tire market with a radialization ratio of 32% compared with 86% in Western Europe and North America.

China now offers the highest growth prospects in Asia for Passenger Car and Truck tires

• Michelin is following a policy of sustained organic growth, backed by selective acquisitions on new markets. Its geographical coverage enables it to serve major vehicle manufacturers throughout the world.

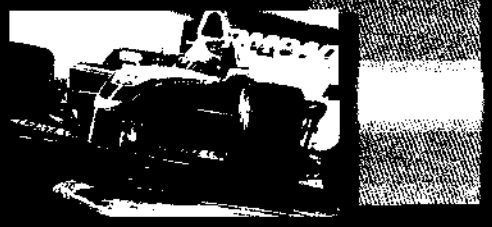
• To speed up the development of PAX System and ensure that it becomes a standard as far as the consumer is concerned, while mobilizing a limited amount of capital, Michelin is developing partnerships with major manufacturers: Pirelli, Goodyear and Sumitomo Rubber Industries.

• Upstream, the Group's recognized expertise in road-holding enables it to form strategic partnerships with automotive manufacturers and industrial companies offering complementary skills in order to develop complete optimized assemblies.

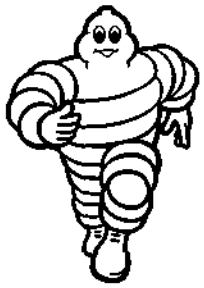
• Downstream, Michelin is present in all the distribution channels. It is broadening its outlook by proposing innovative services to professionals and individuals, in particular via its integrated distribution networks and specialized subsidiaries: emergency assistance, onsite services and the sale of tires "by the mile". It is strengthening Michelin brand links with vehicle manufacturers through its participation in Formula 1 and is also developing licensed products linked to mobility.

• In 1999 in Europe and in 2001 in the United States, the Group introduced a plan to boost its competitiveness. In 2002, these plans and the additional measures currently being set up will lead to a reduction of €150 million in operating costs taken over a full year, giving total savings of €300 million by the end of 2003.
In this respect, worldwide deployment of C3M in 2002 on top-range segments is a crucial advantage. Productivity gains of up to 30% are anticipated from this ultra-flexible, compact process on the segments targeted.

• Michelin enjoys areas of particularly high growth, which include:
- the extremely profitable Performance, High-Performance, 4x4 and SUV tire market which is expected to rise by 40% by 2004;
- Central and Eastern Europe, South America and Asia, where radialization of the market is currently spreading fast;
- extended mobility with PAX System and road-holding, where the combined design of optimized systems is paving the way for new, high added-value technological breakthroughs.



Formula 1: the most prestigious discipline among the mechanical sports, involving close partnerships with the car makers.



Bibendum, the Michelin Man, is known the world over and enjoys an image that a/l brands envy.

Enhancing the value of the Michelin brand

Michelin is one of the world's leading brands, with a brand-recognition rating of 98% in Europe, 96% in North America and 55% in Asia. Its main attributes its technological advance and high quality.
To build on these exceptional assets and strengthen links with the general public, Michelin chose to return to Formula 1 racing, the only motor sport with a worldwide audience.
The Group has also launched a program of licensed products, all linked to mobility.
The first, a snow tire chain, came out in 2001.
Three collections of products will be launched gradually during 2002, 2003 and 2004 in Europe, Asia and North America.

The agreements signed with major manufacturers give PAX System worldwide coverage.

The strength of the Michelin brand

"Brand equity" analysis concerning passenger car tires on 7 major markets.
"Brand equity" is the percentage of the population with an opinion on a brand, multiplied by the perceived quality score attributed to the brand. The higher the equity, the higher the awareness of the brand and perception of its quality.

	France	Germany	Italy	United Kingdom	Spain	United States	Canada
Michelin	**8.86**	**7.65**	**8.07**	**7.40**	**8.36**	**6.74**	**7.22**
Goodyear	**8.09**	**5.86**	**6.60**	**6.21**	**4.60**	**6.39**	**6.25**
Bridgestone	**4.07**	**5.17**	**4.26**	**3.07**	**2.29**	**4.09**	**4.68**
Pirelli	**7.19**	**6.08**	**7.83**	**6.19**	**6.86**	**3.17**	**4.87**
Firestone	**6.19**	**4.26**	**4.20**	**4.51**	**6.12**	**3.76**	**3.85**

Source: Michelin Tracking Study 2001 - Europe (end of October 2001) - USA/Canada (end of June 2001).

Proposing the best possible offering to each of our customers

The best offering at the best price on each market segment: whatever customers are looking for, Michelin wants to propose the best possible solution.
As the Group sells to all the automotive manufacturers and distribution channels, it is developing a multi-brand portfolio and enhancing its offering with skills and services that match the requirements of vehicle manufacturers, distributors, transport professionals and private individuals.

Worldwide development, an organization close to the markets

With 80 production sites worldwide and commercial facilities in 170 different countries, Michelin is able to serve vehicle manufacturers wherever they are located and assist them in conquering new markets. As the world leader in original equipment, the Group's tires are fitted on one new vehicle in three and it has the highest loyalty ratio on the replacement market: 66% in Europe and 47% in North America for the Michelin brand.
For replacement tires, which represent three quarters of Passenger Car-Light Truck sales, the Group is backed by an excellent local network which meets the specific requirements of the markets in terms of products, sales and marketing and is able to take advantage of growth wherever it is strongest.

Its worldwide coverage allows technologies and new products to be deployed quickly and fosters purchasing and production performance. Worldwide steering of production capacities on a medium-term basis by major product segment and decentralization of production planning make a significant contribution to inventory reduction and the improvement of delivery lead times.

A multi-brand strategy, presence on all distribution circuits

Michelin has a multi-brand strategy for Passenger Car, Truck and Agricultural tires in order to meet the price/performance requirements of all its customers by proposing appropriate products and sales conditions for the different distribution channels: traders, specialists, dealers, automotive centers, garages, service stations and large supermarkets.

With Michelin, the leading world brand, BFGoodrich, Kleber, Uniroyal, several leading national brands and well-positioned distributors' brands, the Group has the best portfolio in the profession worldwide. In a rapidly expanding market, strong brands offer a distinct advantage. The recall of Firestone tires actually made the market less standardized by developing consumer awareness of the importance of quality for their safety. It had a direct beneficial impact on leading brands and facilitated acceptance of a firm, revalued price policy.

Skills and services of value to customers

To win market share, it is not enough to have the best product; skills and services must be associated with it to offer the best solutions.

This is what Michelin does with vehicle manufacturers by developing just-in-time deliveries, supplying fitted assemblies and offering new solutions in the fields of extended mobility, road-holding and active safety systems.

On the professional markets, the Group proposes comprehensive services, either directly or via its Euromaster network in Europe and TCI in the United States: the sale of tires "by-the-mile", 7-days-a-week vehicle assistance, retreading and global management of tire expenditure.

It offers distributors safety audit services and recommendations on fitting, delivery automation, inventory management and recovery of worn tires.

Since 1900, it has been a faithful companion to generations of motorists with its maps and guides, now backed by the new ViaMichelin digital mobility assistance services.

The Group's efforts regarding service **excellence have resulted in a satisfaction rate of around 90% in the Passenger Car and Truck sectors in the United States.**

In close pdftnership with the distribution network, the new "Michelin Fleet Solutions" international offering provides a global service to transportation companies seeking to outsource management of their tire expenditure.

Tire Advisor enables all North American Internet users to find the tire most suited to their vehicles and driving styles.

With a commercial presence in 170 countries, Michelin can meet its customers' requirements as closely as possible.

PAX System: a new universal standard

Extended mobility, safety, improvement of performance in terms of comfort and consumption, extra space opening up the way for new vehicle design: PAX System brings added value to drivers and vehicle manufacturers alike, taking it into "pole position" among the major standards of the tire industry of the future.
After-sales services are being set up with approved service points, breakdown trucks and call centers.
In Europe, these services are already up and running, while in the United States, they will be put in place progressively, starting in 2002.
In addition, vehicle manufacturers can already obtain supplies of PAX System products from 4 tire manufacturers.
In 2002, PAX System will be fitted for the first time as a standard feature on 2 of the 5 French models of the Renault Scenic.

Bibserve.com helps distributors to improve management of their business

From major networks to backwoods service stations, over 50,000 distributors in Europe are concerned by the new Michelin Extranet service.
It provides information on the technical characteristics and availability of 3,000 references and enables orders to be placed online 24 hours a day.
By 2002, bibserve.com will be helping distributors improve stock management by means of sales records and forecasting tools. It will also enable the Group's 7 European call centers to step up their commercial activity by freeing them from part of the order-taking process.
The long-term objective is to take 50% of orders online, i.e. over 17,000 per day, and to integrate bibserve.com into the logistics chain management applications.

Daring to be different

Michelin works with all automotive manufacturers worldwide.

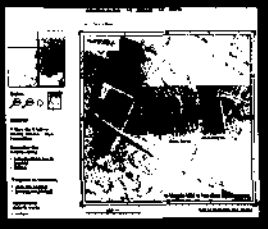
It took only 8 months to develop the new NZG technology which enabled Concorde to return to the skies.

Over 200 technical certifications are awarded **to the Group every year by automotive manufacturers.**

The Scorcher TA Internet program offers **BFGoodrich customers 512 possibilities for customizing the colors of their tires and then ordering them online.**

4,000 researchers are working to improve mobility.

*Optimizing tire performance **by** redesigning the axle. **only** a tire manufacturer could do it!*



ViaMichelin's Internet site proposes mobility assistance services and receives up to 3 million visits a month.

Technological audacity is the key to Michelin's success and the Group intends to remain the most innovative company in its sector in terms of products, production processes and services.

The Group's Research and Development is the world leader in its field. It represents 4.4% of net sales, i.e. €702 million in 2001.

Innovating in close touch with customer requirements

In Europe, the United States and Japan, the Technology Centers design the fundamentals for the tires - materials, architectures, tread patterns, processes - calculation and modeling methods and production machines. They try out their innovations not only in their test centers but also on machines, tracks and in the most extreme conditions of use so that they can propose proven products and processes.

Michelin undertakes research in other fields of innovation with high added-value: the optimization of production processes (C3M), design enhancement (colored tires), etc.

New high added-value technologies: tire pressure control and optimized assemblies

The combined design of the tire and suspension represents an opportunity for Michelin to further reinforce the technological content of its products. Its expertise in road-holding, associated with the skills of complementary partners in electronics and braking, will foster the emergence of systems offering radically new performance characteristics.

In 2001, a partnership was finalized with TRW for onboard tire pressure verification equipment, which culminated in "The EnTire Solution" system to inform the driver whenever there is a drop in pressure. This type of equipment will become mandatory in the United States in 2003. In conjunction with Wabco TIPM, Michelin has also developed an active pressure-management system which automatically adjusts the PAX System pressure.

A joint venture has been set up with the German group Woco in the field of anti-vibration systems: Woco Michelin AVS. The joint venture has itself signed a partnership agreement with the Japanese firm Toyo for development in Asia. In road-holding systems, the Group presented the "Optimized Contact Patch system" in 2001, a new concept developed by Michelin which improves road-holding safety, particularly when cornering.

In the field of vehicle stability and dynamics, Michelin formed a strategic partnership with Bosch in 2001. The prospects are far-reaching, with a long-term approach. The numerous projects already identified include systems to reduce braking distances and systems which combine PAX System with the electronic stabilization program (ESP) to improve mobility if there is a pressure loss.

Innovating with Internet-based services

Michelin is making use of the Internet to improve customers' satisfaction through more efficient management of relations with them and extended service offerings: exchanges of data with vehicle manufacturers; orders, management of services and billing for distributors and transport professionals; tire customization and online ordering for private individuals and electronic services to assist driver mobility in general with ViaMichelin.

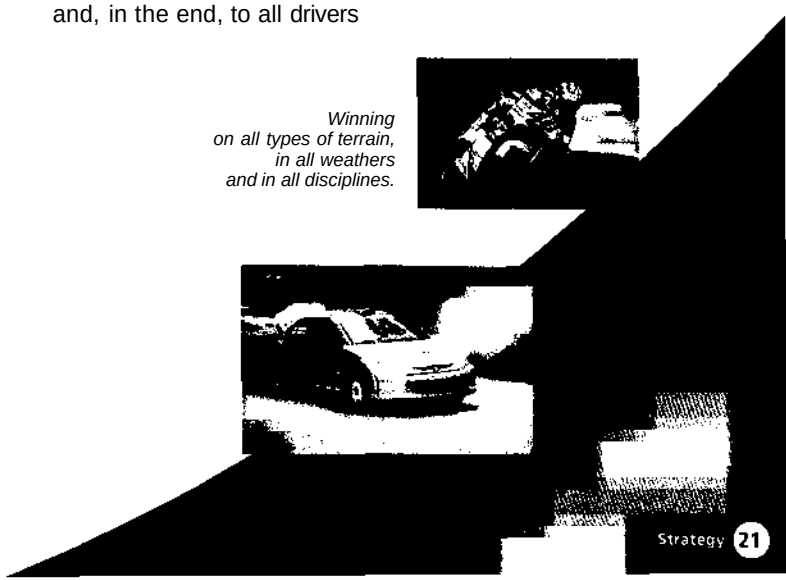
Main innovations in 2001

Automobile tires: Pilot Sport All Seasons, Pilot Sport Cup, Drice, Ivalo 2
Truck tires: X One, XTA2 Energy "low aspect ratio"
Aircraft tires: Air X with NZG technology
Bicycle tires: Mountain Bike Comp S Light, Jet Less, new Axial range
Motorbike tires: Michelin Pilot Sport HPX, Pilot Sport Cup, Enduro Star
Handling equipment tires: Michelin X-Straddle
Earthmover tires: XZSL, X-HAUL
Agricultural tires: MACHXBIB, CARGOXBIB
Road-holding: Optimized Contact Patch System
Electronic pressure monitoring: The EnTire Solution
Distributors' Extranet: bibserve.com
Electronic mobility assistance services: ViaMichelin
Comparative multi-brand Internet service: Tire Advisor
Licensed products: snow chains

Michelin and racing: all the disciplines on all types of terrain

Racing is the best laboratory for testing innovations in extreme situations and provides strong motivation for achieving progress. Formula 1, World Rally Championship, Le Mans 24-Hour Race (automobiles and motorcycles), 500cc, Trial, Enduro World Championships, Dakar (automobiles, motorcycles and trucks). Tour de France cycle race, Mountain Bike, etc. Michelin is the only manufacturer worldwide present in all disciplines, on all types of terrain and in all climates.

The aim is to maintain high-level partnerships with vehicle manufacturers and demonstrate the progress that its innovations can bring to racing teams and drivers... and, in the end, to all drivers



Winning on all types of terrain, in all weathers and in all disciplines.

A company with a strong sense of social responsibility

Michelin's objective is to contribute to progress in mobility. However, this effort only makes sense if, over and above the Company's business results, it aims to achieve sustainable mobility which accompanies and furthers the development of people's activities, constantly improving preservation of the environment and slotting more effectively into people's life-styles.

Michelin considers that all the people involved - its shareholders, employees, customers, suppliers, public authorities and all the organizations with which it has relations - have social, environmental and economic requirements. These are legitimate requirements and Michelin endeavors to satisfy them whenever possible.

Involvement and dialog to make progress together

Michelin relies on motivated employees, capable of making the most of opportunities for growth and progress. To mobilize employee potential and facilitate global integration on the basis of common values and objectives, the Group's organization and management favor responsibility, teamwork and initiative. Training stimulates improvement and sharing of skills. It contributes to the consolidation of a common customer - and results - oriented culture governed by ethical principles. Communication helps employees to understand the stakes better.

Training for responsibility and preparing for the future

To maintain a high level of skills and prepare for the future, Michelin hired 440 top-level managers in 2001 and will be taking on 400 in 2002.

A large number of young people were integrated into the workforce, notably via apprenticeship schemes, where they can take advantage of high-quality professional training. The Group is in fact developing its own technical training school in Clermont-Ferrand and proposes apprenticeships up to graduate level, in association with several universities.

Since Michelin considers cultural difference a major asset, it is also looking to boost the international nature of its management. To this effect it is encouraging local recruitment of young graduates with an international profile and favoring the international mobility of managers with high potential or with key skills.

Developing skills and encouraging mobility

Michelin wants its employees to be among the best professionals in their sectors.

It devotes more than 4% of its payroll to training and develops advanced methods for assessment and individual career and salary management, promoting mobility by means of stimulating, diversified career paths.

Internal promotion is strongly encouraged: more than a quarter of management and almost all foremen have reached their positions in this way. Mobility is the rule and the career paths allow for numerous changes in orientation in the course of a career: on average, an executive changes job or professional sector every four years. As a result of these policies, turnover is less than 4%, which favors capitalization of experience and sharing of know-how on an international scale.

The multi-cultural diversity of its teams is a key advantage for Michelin.

79% of the Group's employees
are proud to work for it.
(ISR 2001 survey)

Since July 2000, Michelin has been **a member of the World Business Council for Sustainable Development, an international association whose aim is to adopt and promote socially responsible behavior.**

Since October 2001, Michelin has been listed in the Dow Jones Sustainability World Index. This index measures the economic, environmental and social performance of 312 companies representing 62 different industries in 26 countries.

Improving dialog with employees

Michelin is particularly attached to the quality of human relations and dialog with employees. Employee expectations are taken into consideration through a professional satisfaction survey conducted every two years. In 2001, over 90,000 people in 17 different countries took part in the survey.

In France, 27,000 employees participated in a referendum on the conditions for application of the law on the 35-hour working week which led to a new work organization and the recruitment of a thousand young people. There was a 95% participation rate and 60% of employees approved the draft agreement which was implemented on May 1, 2001. As an extension to this arrangement, Michelin signed an early retirement agreement with three trade unions. Between now and 2006, 4,900 employees aged 57 and over will be able to take early retirement and the Group will simultaneously take on 2,000 new employees.

On a wider scale, Michelin set up a European Works Committee in 2000. This EWC will help to develop consistency and dynamism within the Group, encouraging the sharing of experience, broadening the outlook of trade unions, employers and staff and asserting the Group's values in line with local situations.

Promoting a multi-cultural environment at all Michelin locations

Michelin considers multi-cultural diversity a major asset. At all the Company's locations, it does its utmost to provide all its employees with the possibility of constructing a varied, enriching career and integrating a wide range of experience into their know-how.

Supporting training and local development

Michelin makes a direct contribution to the training of young people and the economic development of the areas where its facilities are located.

In this way, it facilitates the emergence of the skills and the suppliers required for its activities and the creation of jobs for its employees' families.

Within this framework, the Group gives small and medium-sized regional companies assistance on the international front and contributes financial support and expertise for the creation and development of companies close to its European industrial facilities via the Société d'Industrialisation et de Développement Economique.

The SIDE has contributed to the creation of 7,000 jobs since 1990. Its assistance when the Soissons site closed in 1999 enabled more jobs to be created in 18 months than were lost. Its scope will soon be extended to Europe.

Michelin's "Tremplin Jeunes Vers l'Emploi" is a structure that helps its employees' children to find jobs. In the past 4 years it has helped 1,340 young people.

A company with a strong sense of social responsibility

Making a commitment to sustainable mobility

With 80% of overland transport in the industrialized world, the road transport sector (people and goods) is a formidable means of development for many countries. This mobility can only be envisaged against a backdrop of sustained respect for the environment.

Michelin supports the World Business Council for Sustainable Development's "Sustainable Mobility Project". The aim of the project is to determine the requirements of our society in terms of mobility, the associated risks and the sustainable channels of development to be encouraged. An initial study, the "Mobility 2001" report, has already been published.

The 3rd Michelin Challenge Bibendum held in the United States in 2001 brought together twice as many standard vehicles, public transport vehicles and prototypes as in previous years. Selected according to very strict environmental criteria, these vehicles produced by major manufacturers worldwide proved that sustainable mobility was possible.

An integrated environment management system

In 2001, the Group strengthened its control over its environment policy and industrial risk prevention with the establishment a new department for this purpose. Based on a system of management which makes every employee a fully-fledged player, the policy is also supported by a nucleus of experts for each activity and managers worldwide. Integrated into the quality approach, the system has enabled 19 industrial units to obtain ISO 14001 certification in 2001, making a total of 35 certified sites.

Upstream, Michelin is contributing to progress in the methods and techniques for the production of natural rubber on all its Rubber plantations. This scientific research is benefiting the whole profession because it is ensuring the long-term continuation of production, notably through improvement of the varieties and yields, as well as the fight against diseases affecting Rubber trees.

Innovations that help protect the environment

The original structure of PAX System offers lower rolling resistance (around 20% less than a traditional system for running flat), resulting in a reduction of nearly 2% in fuel consumption and C02 emissions. PAX System also appreciably lowers noise inside the vehicle.

In 2001, Wabco and Michelin announced the launch of the first system designed to monitor the inflation pressure of commercial vehicles: "Integrated Vehicle Tire Monitoring".

It helps to maintain tire pressure within the optimum range for driving performance and reduces fuel consumption.

Recycling used tires

Michelin is participating in the development of channels to recycle worn tires for use as a raw material - road surfaces, synthetic flooring - and as fuel, particularly in the cement industry.

In the United Kingdom, a joint venture set up by Michelin and Blue Circle in 2001 has recycled 35,000 tonnes of used tires. In France, the creation of Aliapur in conjunction with five manufacturers reflects the Group's desire to pursue an active recycling policy for used tires.

Michelin, the world's leading manufacturer of "green tires": nearly 500 million tires produced since 1992.

In 2001, Michelin secured the first 4 places in the 6th "World Solar Challenge" (crossing Australia from North to South in solar vehicles).

With the Michelin Challenge Bibendum, Michelin is contributing to the development of sustainable mobility, in collaboration with vehicle manufacturers.

After being ground up into fine granules, used tires are recycled, notably in sports grounds and road surfaces.

By generalizing the Energy range on the road and highway segment in Europe, Michelin is placing the environment at the heart of its strategy.

Analysis of a tire's life-cycle

The results of a study carried out by Michelin with the European manufacturing profession in 2001 showed the use of tires to be the phase with the most impact on the environment.

Example of a simplified energy balance sheet for 4 tires fitted on a passenger car in the European market (base-100):

Production of raw materials	100
Production of the 4 tires	20
Use of the 4 tires	**1,366 (1,171 for green tires)**
Recycling (energy saving)	-80 (use in cement plant furnaces)

The study proves that the major issue for the environment lies in the search for less tire rolling resistance, an essential factor if fuel consumption is to be reduced.

The reduction in energy use achieved simply by choosing green tires is higher than the amounts of energy required to produce the raw materials and to manufacture the tires combined!

A company with a strong sense **of social responsibility**

Sustainable growth in the Company's value

Michelin is constantly improving its methods and management in order to create more value, sustainably, and it is involving its employees in the improvement of its performance. Its status as a partnership limited by shares supports this objective by encouraging the deployment of long-term strategies, led by a stable, responsible management team.

Business decisions based on the creation of shareholder value

Since 1993, Michelin has set annual value creation targets[01], expressed in terms of return on capital employed (economic capital plus debt).

The Group uses the Free Cash Flow to Economic Capital method to measure value creation. This method consists of allocating a portion of economic capital and debt to each asset, based on the level of risk associated with the asset. The change in the level of risk over time is taken into account by basing the calculation on the net book value of assets, after depreciation and amortization.
The Group has set as its target a high after-tax return on economic capital of 15%, based on euro interest rates. Using this overall target as a starting point, separate targets are then set for each country, taking into account differences in interest rates and risks. The average required rate of return on economic capital for 2001 was 16%.

The Group uses economic capital allocation techniques as a basis for operating decisions - concerning for example capital expenditure, customer credit limits and the outsourcing of certain activities.

To measure value creation, target risk-adjusted return on capital (RAROC) - corresponding to the calculated cost of debt and economic capital expressed as a percentage of capital employed - is compared with actual RAROC, corresponding to net income before interest expense, also expressed as a percentage of capital employed. In 2001, the Group failed to achieve its target. At 6.8%, actual RAROC was below target RAROC of 10.7%.

Teams associated with the improvement in performance

Managers' salaries are made up of a fixed part and a variable part, according to the objectives set at the start of the year. These objectives are partly linked to the Group's financial performance and partly individual.
To boost motivation and associate all its staff with the creation of value, Michelin will be setting up a stock-option plan in 2002 and will be introducing a worldwide employee stock ownership plan in all the countries where the legislation permits it in the 1st half of the year. Initially, it will concern 92,000 employees in 14 countries. It will then be opened up to all the Group's employees.

(1) A more detailed presentation of the method applied is given on page 64.

In the first half of 2002, Michelin is launching ***an employee shareholding plan.***

Corporate governance with a clear separation between the managerial and control functions

The Articles of Incorporation of CGEM, which is a Partnership Limited by Shares, comply with corporate governance requirements.

• There is a clear-cut separation of power between the Managing Partners who manage the company, and the Supervisory Board which, having the same investigatory powers as the Statutory Auditors, report to the shareholders of the regularity of accounts and the proper management of the Company. The Managing Partners cannot be member of the Supervisory Board nor can they take part in their election.

• The Managing Partners have unlimited liability up to the total value of their personal assets, which reflects the appropriate balance between proprietary commitment, power and liability.

The Supervisory Board can oppose the appointment of a Managing Partner. As a last resort, the shareholders are responsible for taking the final decision at the General Meeting. The Board has the same access to information and the same investigatory powers as the Statutory Auditors. It is obliged to give a reasoned opinion on any operation liable to modify the share capital.

The very composition of the Supervisory Board ensures its competence, independence and availability. The majority of its members are independent in the sense of the Viénot Report. CGEM does not have any holdings in companies in which the members of its Supervisory Board work or hold corporate appointments. Neither the Managing Partners nor the senior management of the Michelin Group are involved in the governing bodies of these companies.

To fulfill its role, the Supervisory Board must be in a position to fully analyze and understand the Company's strategy and results. This information is provided regularly by the Managing Partners by means of in-depth presentations by managers on subjects which are essential for a clear understanding of how the company is run.
The Supervisory Board has set up specific management report for assessing the parameters of Michelin's performance and, in particular, the level of dividends proposed. Since there are only five members of the Board, subjects normally delegated to committees are handled by the Board as a whole. Thus, in 2001, the Supervisory Board started to act as a Remunerations committee and assessed more specifically the planned Employee stock ownership and stock option plans, as well as variable remuneration. An Audit committee will be set up in 2002.

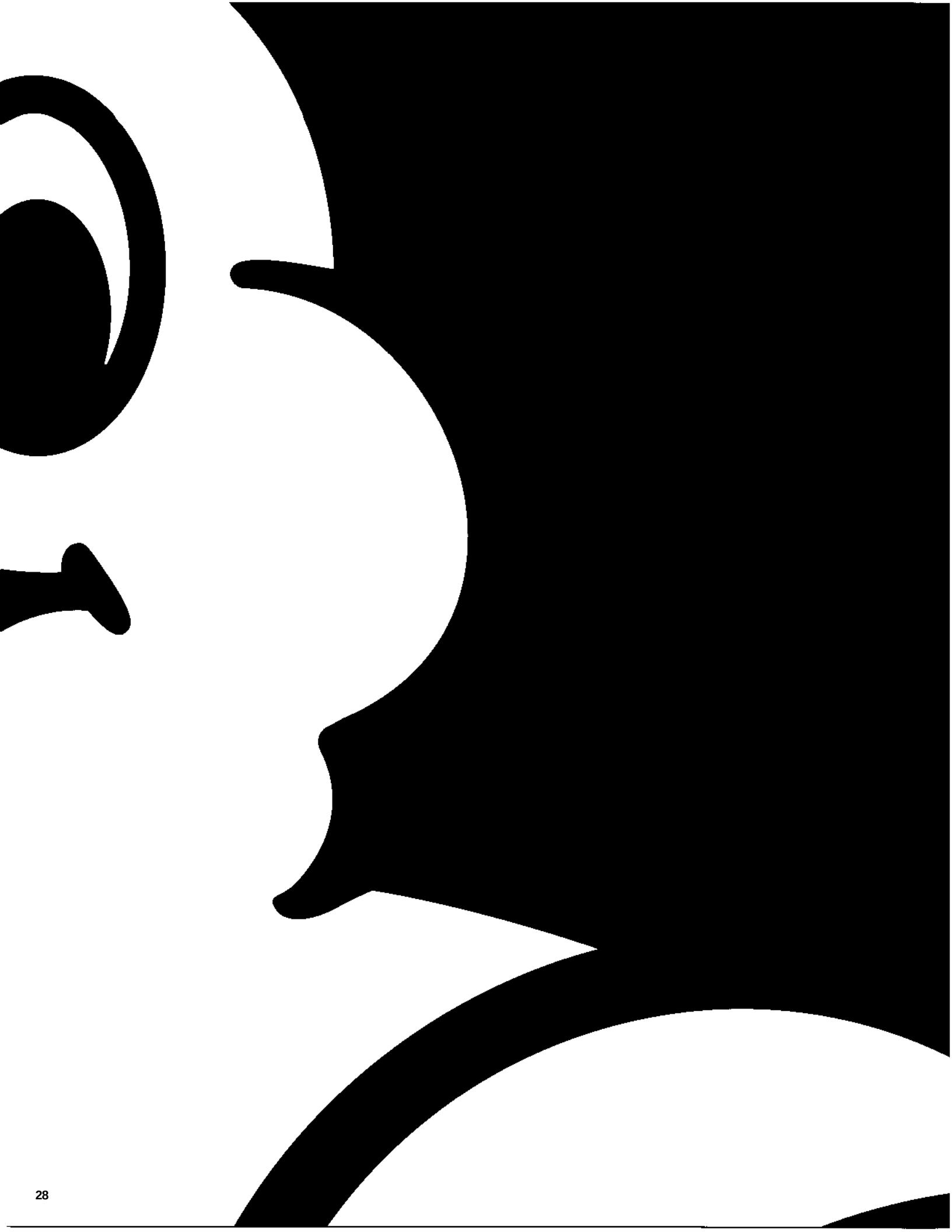
CGEM only issues registered shares and is therefore able to maintain a direct relationship with its shareholders. Each shareholder receives the documentation relating to the Annual General Meeting 5 weeks beforehand to enable him to take full advantage of his voting rights. Moreover, it is not necessary to block shares to participate in the Annual General Meeting as is the case for bearer shares.
Since Michelin was first listed on the Paris Stock Exchange, all its Annual General Meetings have taken place on first call, which reflects the interest of its shareholders regarding the business and management of the Group.

Michelin value creation

in millions of euros

	1997	1998	1999	2000	2001
Economic capital	3,397.8	3,680.3	4,053.2	4,429.9	4,592.0
Weighted average cost of economic capital	16.9%	17.0%	17.0%	16.3%	16.0%
Allocated debt	3,912.5	4,206.1	4,675.5	5,183.1	5,225.7
Weighted average cost of debt	7.6%	7.0%	6.1%	7.2%	6.1%
Capital employed	7,310.3	7,886.4	8,728.7	9,613.0	9,817.7
Target RAROC	**11.9%**	11.7%	**11.2%**	**11.4%**	10.7%
Net income	626.7	573.7	182.5	438.4	313.9
Interest expense	258.8	255.0	281.5	358.2	350.7
Actual RAROC	12.1%	10.5%	5.3%	8.3%	6.8%

Michelin has deliberately set high standards in terms of return on economic capital. Had the objective been 12%, the target RAROC would have been 9.7%, 9.3%, 8.8%, 9.4% and 8,9% respectively.



2001
Managing Partners' Report

to the Annual General Meeting on May 17, 2002

Affected by the general economic downturn that started to be felt from the beginning of 2001, most tire markets registered a significant drop. In the spring, Michelin took the necessary decisions in this difficult context. The Group's **Speed Of reaCtJOH,** the new **results of its strategy of targeted growth and its pricing policy designed to protect margins mean that for 2001, as in 2000, Michelin has emerged as one of the best pGtfOriTierS in the automobile industry.**

Progress in the Passenger Car-Light Truck activity, the strong resistance of Truck activity in a very difficult environment, the reduction of inventories and the stabilization of debt are all factors that allow Michelin to face 2002 in good conditions, despite markets that will certainly be as difficult as 2001.

The world tire industry in 2001

A substantial fallback in world growth

World growth fell back sharply in 2001, registering around 1% growth, against 4% in 2000.

• the United States entered recession in March and the events of September 11th amplified this trend.

• Europe registered flagging results from the second quarter on, except for central and eastern European countries, where growth was sustained due to dynamic internal demand.

• The depression hit Japan in the 2nd quarter.

. The emerging Asian nations, with the exception of China and, to a lesser extent, India, suffered from a drop in exports and demand for electronic products.

. Latin America was penalized in the 2nd half by the growing Argentinean crisis, political uncertainty and the energy crisis in Brazil.

• The African countries suffered from the fall in raw materials prices, while the Middle East was affected by falling oil prices.

The automobile industry slows down

• Passenger car production was stable in Europe. In North America, where most sales were made in Q4 de-stocking operations, the fall in production reached nearly 13% for passenger cars and 7% for leisure vehicles and pick-ups. These also faltered significantly in Japan.

• The year was particularly difficult for truck manufacturing. The market collapsed by over 30% in North America (Class 4 to 8) and by 7% in Western Europe, with the trend accelerating in the 2nd half. In Asia, China's good performance compensated for the production cutbacks in South Korea, while Japan remained stable.

Significant slowdown in most tire markets

After strong growth in 2000, the slowdown of the tire markets grew more apparent by the 2nd half, particularly in the 4th quarter.

• In North America, despite the effects of the various recall programs, the markets fell sharply in Passenger Cars-Light Trucks and Trucks for both original equipment and replacements.

After the 7 million tires recalled by Firestone in 2000, at the end of May, Ford recalled 13 million tires of the same brand fitted on its Explorer model. This had a strongly disruptive effect on the replacement market. However, these events have helped raise awareness of the major importance of tires in vehicle safety. American consumers have now become more interested in quality and in strong brands - to the detriment of private labels.

• The European markets were less affected, but their growth rate nevertheless registered a fall. Reflecting the general economic slowdown, 2nd half figures are also down for trucks, for both original equipment and replacements.

• To a greater or lesser degree, this slowdown has also affected the tire markets in Asia, Latin America, Africa and the Middle East.

In this context, manufacturers have started the process of reducing their industrial capacity and reducing their rates of investment in Europe, as well as in North America.
But at the same time - and this is a first - they have also increased their prices with the aim of enhancing the value of their products, particularly in North America. Generally, these increases have been well accepted by customers in the Passenger Car-Light Truck and Truck sectors.

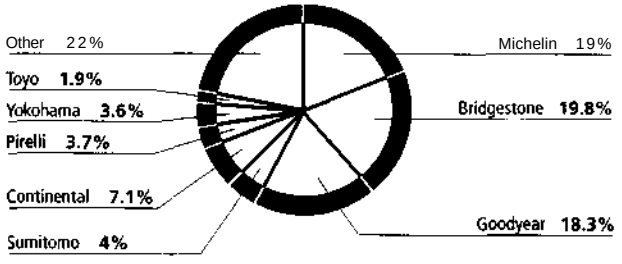
Finally, the forthcoming application (in 2003) of the regulations in the American Tread Act, which sets new standards in monitoring tire pressure, triggered a move towards alliances between manufacturers and specialists in sensors, brakes and electronics. Starting off in 2001, the movement has led to agreements signed between Michelin and TRW and between Goodyear and Siemens.

Real GDP % change	2000	2001 (estimated)	2002 (forecast)
World	+3.8	+1.1	+1.2
North America 0)	+4.1	+1.1	+0.9
Western Europe	+3.3	+1.6	+1.3
Eastern Europe	+6.3	+2.1	+3.2
South-East Asia	+5.8	+1.3	+2.6
Latin America	+3.8	+0.7	+1.7

(1) USA and Canada.
Source: Consensus Forecast - December 2001.

The world tire market

Source: Tire Business - August 28. 2001.



Changes in the main tire markets in 2001 and 2000

	2001/2000 1st half	2nd half	Year	2000/1999 Year
Europe [1]				
Passenger Car-Light Truck				
• Replacement	+1.9%	-0.3%	+0.8%	+0.3%
• Original equipment	+1.5%	-0.2%	+0.7%	+2.1%
• Winter	N.APP.	-9.2%	-9.2%	0%
Truck				
• Replacement [2]	-2.5%	-1.5%	-2%	0%
• Original equipment	-3.5%	-11%	-7.1%	+12.1%
North America [3]				
Passenger Car-Light Truck				
• Replacement	-2%	-4.7%	-3.4%	+3.5%
• Original equipment	-12.5%	-6.5%	-9.7%	+0.8%
Truck				
• Replacement [2]	-11%	-0.9%	-5.7%	-0.8%
• Original equipment	-43%	-28%	-37%	-17.9%
Asia				
Passenger Car-Light Truck				
• Replacement	N.AV.	N.AV.	+2.5%	+4.4%
• Original equipment	N.AV.	N.AV.	0%	+4.9%
Truck				
• Replacement [2]	N.AV.	N.AV.	+4.6%	

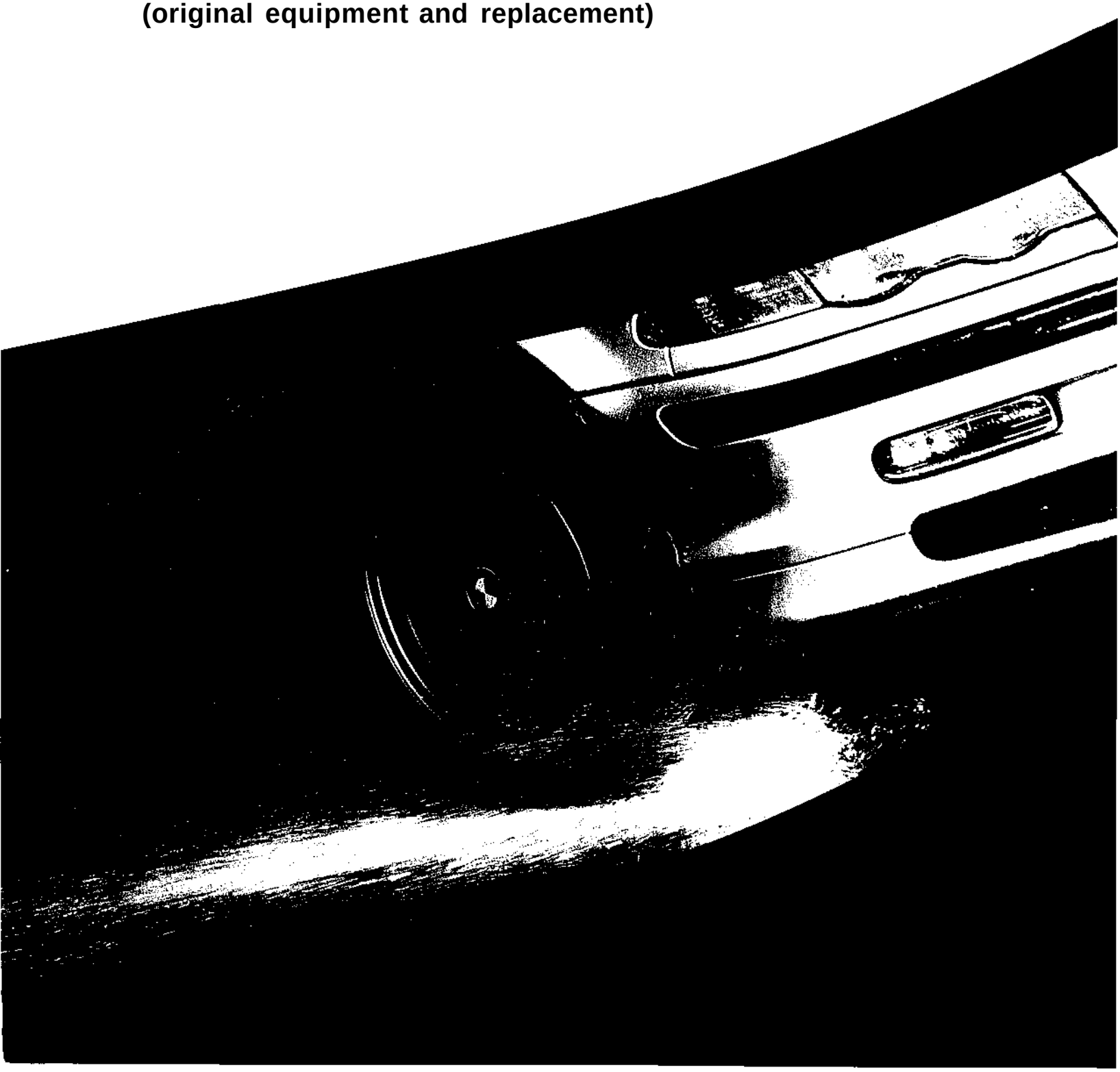
(1) Western Europe + Eastern Europe, excluding the Commonwealth of Independent States (CIS).
(2) Radial + conventional tires (bias).
(3) USA + Canada + Mexico.

Notes: detailed data concerning the world tire market is available on Internet; www.michelin.com.
The 2001 Fact book is also available on request on CD-ROM. Simply contact the Investor Relations Department (address on page 110).

Passenger Car
Light Truck

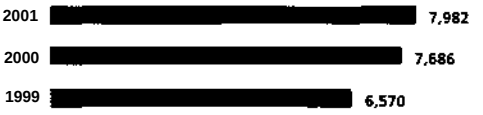
Joint leader worldwide
The leader in the highly technical tire sector

A 20% share of the world market
(original equipment and replacement)



In markets that shrank by 1.7%, which affected volumes, sales increased by 3.8%, while the operating margin grew by 1.3 point to 8.9%, due to targeted growth in buoyant, lucrative segments and a pricing policy designed to protect margins.

The responsiveness of the teams, demonstrated by the control of inventories, and the improvement in our competitiveness reinforce the Group's confidence in its ability to reach the targets set for 2005.



Net sales +3.8%
in millions of euros

Operating margin
in%

The characteristics of the market

The Passenger Car and Light Truck market represented 60% of the world tire market in value and 911 million tires in 2001, including 71 % for the replacement segment. It is a consumer goods market characterized by the importance of brands, the diversity in customer expectations and the wide range of distribution channels.
Its slow but durable global growth rate is in line with a trend of long-term growth of around 2 to 3% annually.

In 2001, the market suffered a fall of 1.4%, but high added-value segments continued their upward trend: +16.2% for High Performance tires[0)] and +1.3% for 4x4 tires.

Michelin's strategic orientations

The Group places the greatest importance on understanding and anticipating market trends to propose a complete multi-brand offer, which is able to respond to the varying needs of consumers.
It has developed a "system approach" for original equipment in the framework of close strategic partnerships with manufacturers.
In the original equipment sector, as in the replacement sector, it gives priority to high added-value segments, represented by High Performance [(1)], 4x4 and winter tires.
Present in all distribution channels, Michelin is developing its service offering and reinforcing its direct links with consumers - particularly to the advantage of its "flag" brands[(2)] (Michelin, BF Goodrich).

Adapting its industrial strategy to its market strategy, Michelin has launched a major program to improve the performance of its supply chain and make the Group even more competitive.

The European and North American markets by segment

	Europe	North America
Mass Market	35.6%	58.6%
Performance (H, VZ)	34.6%	11.5%
4x4 SUV	2.6%	20.2%
Winter	20.3%	2.8%
Light truck	7%	6.9%

2001 in brief

Sales increased by 3.8%, despite a drop in volume of 3.8%. The Group achieved strong growth - much higher than the market growth rate - in the High Performance replacement segment (+17%) and the 4x4 replacement segment (+15%) at world level.
It has increased its market share in Europe, North America and South America in the priority targeted segments and greatly improved its category/brand mix.

Alongside this, Michelin has also achieved further improvements to its competitiveness and made further progress in inventory control.

Operating margin was up by 1.3 point at 8.9%.

In the field of development, the deployment of C3M, which is aimed at the top of the range, has been accelerated.
The Group made an important acquisition in Romania and has also signed a majority partnership agreement with China's first-ranked radial tire manufacturer. It has signed an agreement with Sumitomo Rubber Industries to develop and promote PAX System in Japan. It has set up a strategic partnership with Bosch in the field of dynamic management of vehicle handling.

(1) VZ speed index tires.
(2) The "flag" brands are owned by the tire manufacturers, unlike the "private iabel" brands, which are generally owned by the distributors.

Passenger Car Light Truck

In the replacement sector, the markets were contrasted, with a rise of 0.8% in Europe, (higher than in 2000), a fall of 3.4% in North America, stability in South America and a lower growth rate than last year in Asia.

An enhanced product mix in Europe

In Europe, the summer tire markets continued the upward trend recorded over previous years. The enhancement of the product mix continued: while the Mass market(1) fell back by 2.7%, the Performance and 4x4 segments increased by over 15%.

The Group's commercial performance (+1 %) is in line with general market performance, but Michelin has continued to develop at a faster rate in its "flag" brands (+3.3%), in the Performance segment and, more particularly, in High Performance (VZ). It has also continued to increase its market share. At the same time, the price rises implemented in November 2000 have held up well.

However, the highly profitable winter tire market shrank by 9.2%. Winter's late arrival enabled distributors to use up their inventories but did not encourage them to restock. Despite this, the Group maintained its positions. In "flag" brands, its sales resisted better than the market and grew significantly in Eastern Europe, Northern Europe and Scandinavia.

The Michelin brand achieved rapid progress in the North American market

With a fall of 3.4%, the North American market has returned to 1999 levels. The Performance and High Performance segments grew significantly while the 4x4 (SUV) market stabilized and the Mass Market shrank by more than 6%.

Against this background, the "flag" brands continued to attract growing numbers of consumers: up by 6%, Michelin brand sales have increased their market penetration.

In the 4x4 (SUV) segment, the Group continued to record very substantial gains in market share. However, 2001 was an exceptional and unrepresentative year because of Ford's recall decision. The Group supplied 2.6 million of the 9 million tires replaced by Ford at the end of December 2001.

In addition, the price rises implemented on January 1 and August 1 held well.

In South America, the Group's market share grew by more than 1.6 point in a market that was stable overall. However, in reality, there was a sharp fall in the 2nd half of the year due to the economic and financial situation in this region. The price rises applied in Brazil only partially compensated for the gradual devaluation of the real.

In Asia, the Group continued its policy of refocusing on high added-value segments in Japan, with luxury cars and 4x4 vehicles, which was reflected in a drop in sales volume. In the other countries in the zone, sales were in line with the falling markets, except in China where the Group's performance was very good.

Better highlighting of added value in original equipment

In the original equipment segment, the Group's refocusing policy and the shrinking markets led to a fall in sales volume in Europe and North America.

At the same time, the quality of the category/brand mix continued to improve throughout the year and the Group made every effort to highlight the added value provided by its products, particularly products under the Michelin brand.

Good progress in operating margin

At 8.9%, operating margin rose substantially. This improvement has been constant all year long. It is the result of a favorable original equipment/replacement mix, the price rises applied at the beginning of the year and during the year, strong growth in the High Performance (VZ) and the 4x4 segments, faster sales growth for the "flag" brands and close control over costs. And all despite the slowdown of the factories at the end of the year and the rise in raw materials prices.

Once again, these good results show the pertinence of the refocusing strategy that the Group has been committed to for several years. It helps to improve profitability by achieving a better balance between sales in original equipment and replacement, by developing high added-value segments without abandoning the mass market and by highlighting the added value that the Group's products bring to customers.

(1) The "Mass Market" or "Consumer Market" covers tires for Passenger Cars and Light Trucks with a speed index less than or equal to T.

Changes in Passenger Car-Light Truck sales volume, 2001/2000

In units	Total sales	Replacement	Market Replacement	Original equipment	Market Original equipment
Total	**-3.8%**	**-1.6%**	**N.APP.**	**-8.4%**	**N.APP.**
Europe (1)	**-3.4%**	**+1.0%**	**+0.8%**	**-9.5%**	**+0.7%**
North America (2)	**-2.5%**	**-1.2%**	**-3.4%**	**-6.2%**	**-9.7%**
Other regions	**-10.2%**	**-10.6%**	**N.APP.**	**-9.1%**	**N.APP.**

(1) Western and Eastern Europe (excluding the Community of Independent States).
(2) USA, Canada and Mexico.

The highly profitable 4x4 tire market is growing rapidly.

With PAX System, you can drive in complete safety at 80 kph for 200 km after a puncture.

MicheMn, the leading world brand in "equity" terms, registers the highest loyalty rating in the replacement market.

The "flag" brands represent nearly 59% of the North American replacement market.

More than 60% of the High Performance market is concentrated in **EuTOpe.**

The Group is ranked **first in the radial market in China,** with its Michelin and Warrior brands.

The track performance of the new Pilot Sport Cup tire has been hailed as exceptional for a tire also certified for road use.

High performance, high potential

While High Performance tires still only account for 10% of the world market in terms of volume, they are set for a bright future and are expected to reach total growth of over 30% between now and 2005.

Several of the Group's brands are positioned on this segment, particularly Michelin, with the Pilot Sport, Primacy and Exalto range, and BF Goodrich, with Profiler G.

In addition to their excellent performance, these products also stand out by their resolutely original design, in response to new expectations from demanding consumers.

The manufacturers certainly made no mistake about it: Audi, BMW, Chrysler, Ford, Ferrari, Jaguar, Mercedes, Nissan, PSA Peugeot Citroën, Porsche, SAAB, Volkswagen, Volvo and Renault have already ratified Michelin Pilot Sport or Michelin Pilot Primacy for the original equipment of their very top of the range models.

The Group's objective is to achieve a 50% world market share in original equipment for the top-range segment and one third of the European Performance replacement market by 2005.

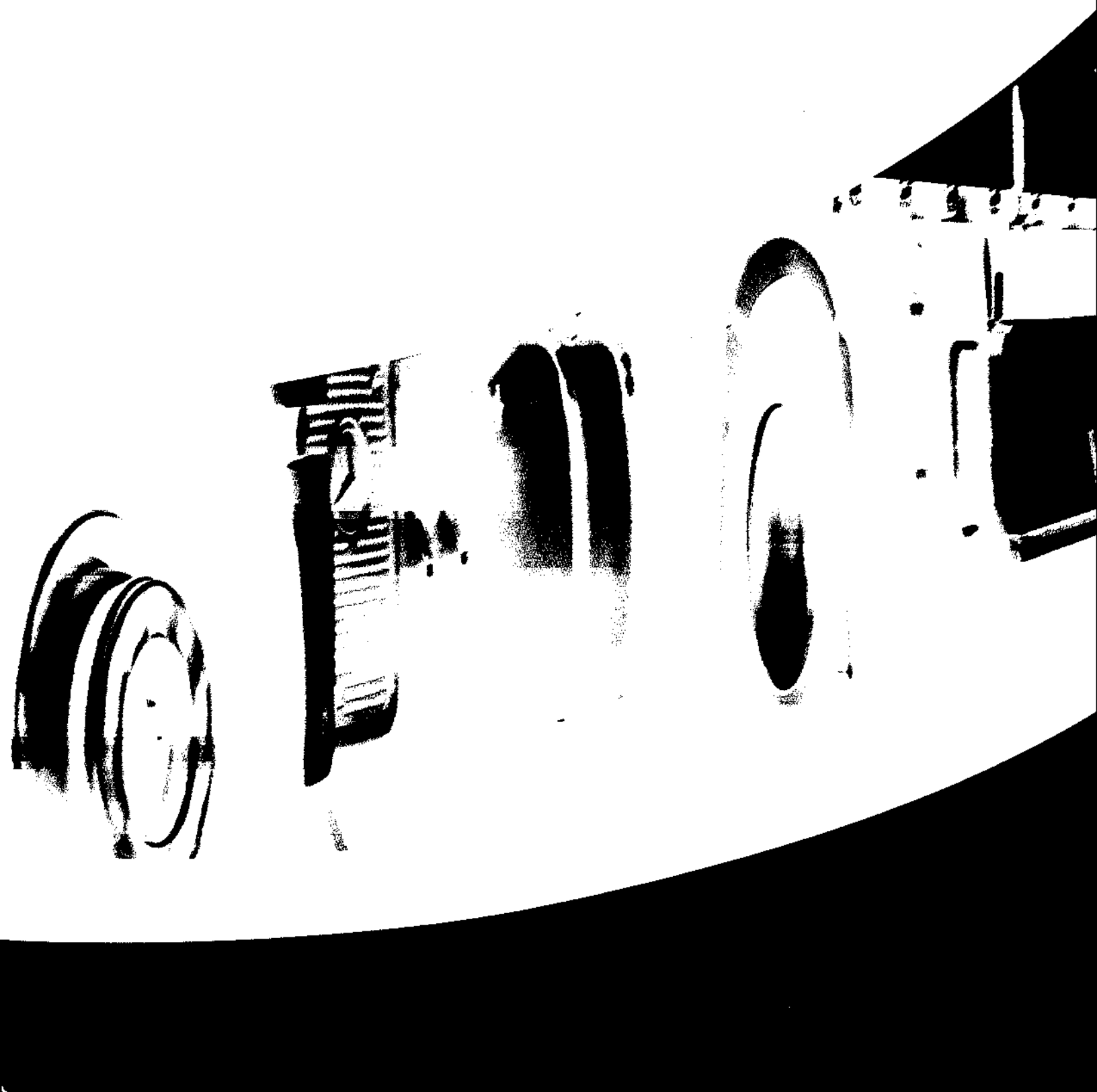
Developed with our partners, pressure monitoring is increasingly being incorporated into vehicle instrument panels.

Truck

World No. 1, leader in highly technical tires

33% of the original equipment market

21% of the radial replacement market



In sharply falling markets, sales were down by 6% in tonnage but 4.3% in value, as the price rises made in the replacement market held up well, with the exception of North America. Vigorous braking measures were applied to production in North America and Europe from the spring. These made it possible to control inventories, but had a detrimental effect on operating margin, down 4.8 points to 8.8%. However, these figures remain the highest in the Truck tire industry.

The responsiveness of our teams and improvements in our competitiveness increased market share for the Michelin brand, commercial performance in the retreading markets and management solutions for large fleets in their tire service are features that should allow us to get back to the average level of contribution of recent years, when the markets pick up, and to reach the objectives set for 2005.

Net sales - 4.3%
in millions of euros

Operating margin
in%

Principal markets
in millions of radial tires (2001)

	Europe	North America	South America	Asia	Africa Middle East
Original equipment	4.2	4.1	0.8	1.4	0.2
Replacement	11.3	15.0	3.7	10.7	5.4
Retreading (1)	8	17.8			

(1) Treads.

The characteristics of the market

The Truck market represented 26% of the world tire market in value and 93 million tires in 2001, including 84% in the replacement segment. Only 62% are radials, compared with almost 100% in passenger car tires.

This is a highly technical capital goods market and the customers are professionals for whom the price per kilometer is a key factor. In Europe and North America the retread market is as big as the new replacement tire market.

It's slow but regular growth rate is in line with a long-term trend of around 2 to 3% per year, with significant development opportunities for radial tires in Eastern Europe, South America and Asia.

The market shrank by 4.3% in 2001.

Michelin's strategic orientations

The Group places the greatest importance on continuing to reinforce the position of the Michelin brand and developing combined products / services solutions that allow its customers to concentrate on transport, the heart of their profession, thus boosting their competitiveness and improving the availability and mobility of their vehicles.

With the Michelin brand, the Group's objective is to remain the uncontested technological leader in new tires for original equipment or replacement, as well as in retreading.

Michelin also proposes a complete portfolio of brands, making it possible to respond to the different expectations of its customers and to develop close partnerships with manufacturers and distributors.

The Group has undertaken a major program to improve the performance of its supply chain and to increase the critical mass and competitiveness of its factories.

2001 in brief

In markets down 4.3% in volume, sales declined by 4.3%. The year's outstanding events were a historic fall in the North American markets and a significant slowdown in the European original equipment markets in the 2nd half. In replacement sales involving a switch to the Michelin brand in Eastern Europe, in Asia and in retreading, the Group recorded a growth rate higher than the market averages. A tire recall program was carried out in Japan.

In this difficult context, the substantial reduction in production made it possible to control and reduce inventory. Operating margin contracted by 4.8 points to 8.8%.

In the development field, the A2 Energy range has confirmed its breakthrough in Europe and the X One tire is beginning to achieve its first successes. The customized "Michelin Fleet Solutions" offer and the 24/7 breakdown service, Michelin Euro Assist, both got off to a good start in Europe. The launch of IVTM, a pressure monitoring system developed with Wabco, is also promising.

Truck

Good resistance in the replacement market in Europe

In Europe [1], the fallback was 2% for the year. After a drop in the 1st half, the following six months were positive, supported by the preparation for the changeover to the euro and the corresponding sudden boom in consumption. The 4th quarter showed a clear break.

Western Europe was down by 0.9% with a contrasting picture: slowdowns in the French and German markets and progress in the other markets. The fall in Eastern Europe was 7.2%.

The retreading market remained stable.

In this unfavorable context, sales increased by 0.6% in volume, due to the progress made by retreading and by the Michelin brand in Eastern Europe and because the price rises implemented in January held up well.

In the West, the success of the multi-brand offer (Michelin, Taurus, Riken and Kormoran) enabled the Group to maintain its positions.

The "Michelin Fleet Services" program and the new Michelin Euro Assist service were launched in March 2001 and are progressing well. The number of calls handled in 2001 was up by more than 50% on the previous year.

In the original equipment market, the Group's sales fell back by less than the market rate and Michelin improved the positions achieved in 2000.

(1) West + East, radial + bias.

A historic fall in the North American markets

In North America, the sharp fall in the replacement market reached nearly 6%, with a drop of 11% in the 1st half, which was linked to the economic downturn and significant destocking by distributors. The positive impact of the drop in sales of new tires for trucks in the replacement market made it possible to limit the fall to 0.9% in the 2nd half.

The retreading market shrank by 5%.

In Mexico, the continuing "radialization" policy led to growth of around 3% in the radial market.

The failure of the Group's price rises in December 2000 was reflected in the 1st half by a fall in sales twice the market average, but the Group gradually won back market share to reach the 2000 level by the end of the year.

In Mexico, Michelin continued to progress in the radial market.

In the retread sector, despite a falling market, the Group continued to win market share in the United States and Canada, while the activity was just beginning in Mexico.

In the original equipment sector, the Group was faced with a market that was almost halved compared with the end of 1999: in fact, the market is back to its 1984 level. In this very difficult environment, the Group has increased its market share.

In South America, sales grew by 3.5% in markets that shrank by 3%, with significant progress for the Michelin brand, particularly in the Andean Pact countries. Retreading activity grew by more than 60% in the continent as a whole.

In the original equipment sector, the Group reinforced its positions in Brazil, despite a slightly falling market.

In Asia, the Group's commercial performance was excellent in China, which accounted for 40% of the zone's market. Michelin brand sales rose by 71 % in a radial market that saw strong growth.

Very significant progress was also achieved in Thailand and South Korea and, to a lesser extent, in Oceania.

In Japan, 35,000 tires were recalled in April. This was the first time a manufacturer had carried out this kind of operation in a public and transparent manner, and customers and the authorities appreciated the approach.

At 8.8%, operating margin fell by 4.8 points

The successes recorded by the Truck tire activity in Europe, South America and Asia were not enough to compensate for the sharp fall in the North American markets and the decline in market share in the replacement market recorded in the 1st half of the year in this region.

Combined with the radical but necessary reduction of inventories and the slowdown of the factories from March, this explains the fall in operating income, which reached an all-time low.

In the 2nd half, profits were maintained at the level achieved in the 1st half, despite a sharp fall in the European original equipment and replacement markets in the 4th quarter and the heavy depreciation of the Brazilian real.

However, the reduction in inventories and capital spending should allow us to face the markets, which will be just as difficult in 2002, in better conditions.

Changes in sales volume Trucks 2001/2000

In units	Total sales	Replacement [3]	Market Replacement [2]	Original equipment	Market Original equipment
Total	**-8.1%**	**-4.4%**	**N.APP.**	**-15.5%**	**N.APP.**
Europe [1]	**-3.4%**	**-0.8%**	**-2.0%**	**-6.7%**	**-7.1%** [4]
North America [1]	**-20.3%**	**-11.7%**	**-5.7%**	**-34.4%**	**-37.0%**
Other regions	**-0.2%**	**-1.8%**	**N.APP.**	**+ 14.2%**	**N.APP.**

(1) Western and Eastern Europe (excluding the Community of Independent States).
(2) USA, Canada and Mexico.
(3) New tires only.
(4) Tires for tractors and trailers.

The new "low aspect ratio" tire which allows the cargo volume to be increased by 4 cubic meters.

The brand and COSt per kilometer, the leading criteria for choice in the European replacement market.

Mkhelin is the preferred brand of 60% of long-haul transporters in Europe.

Thanks to retreading and the extended life span that it provides to tires, the cost per kilometer of a Mkhelin tire is, on average, more than 10% lower than that of its competitors, even though the selling price is higher.

The X One heralds a revolution in the chassis of urban transport vehicles by extending the width of the space inside by 27 cm.

With his computerized tablet, the Michelin sales engineer updateshiscustomers' tire data.

Truck fleets: fully inclusive and competitive solutions

All transporters would like to reduce their tire expenditure, which represents an average of around 3% of operating costs, compared with 20% for fuel. They would also like to be able to concentrate on the core of their profession: the truck is a tool whose costs must be as low as possible while mobility and availability are increased.

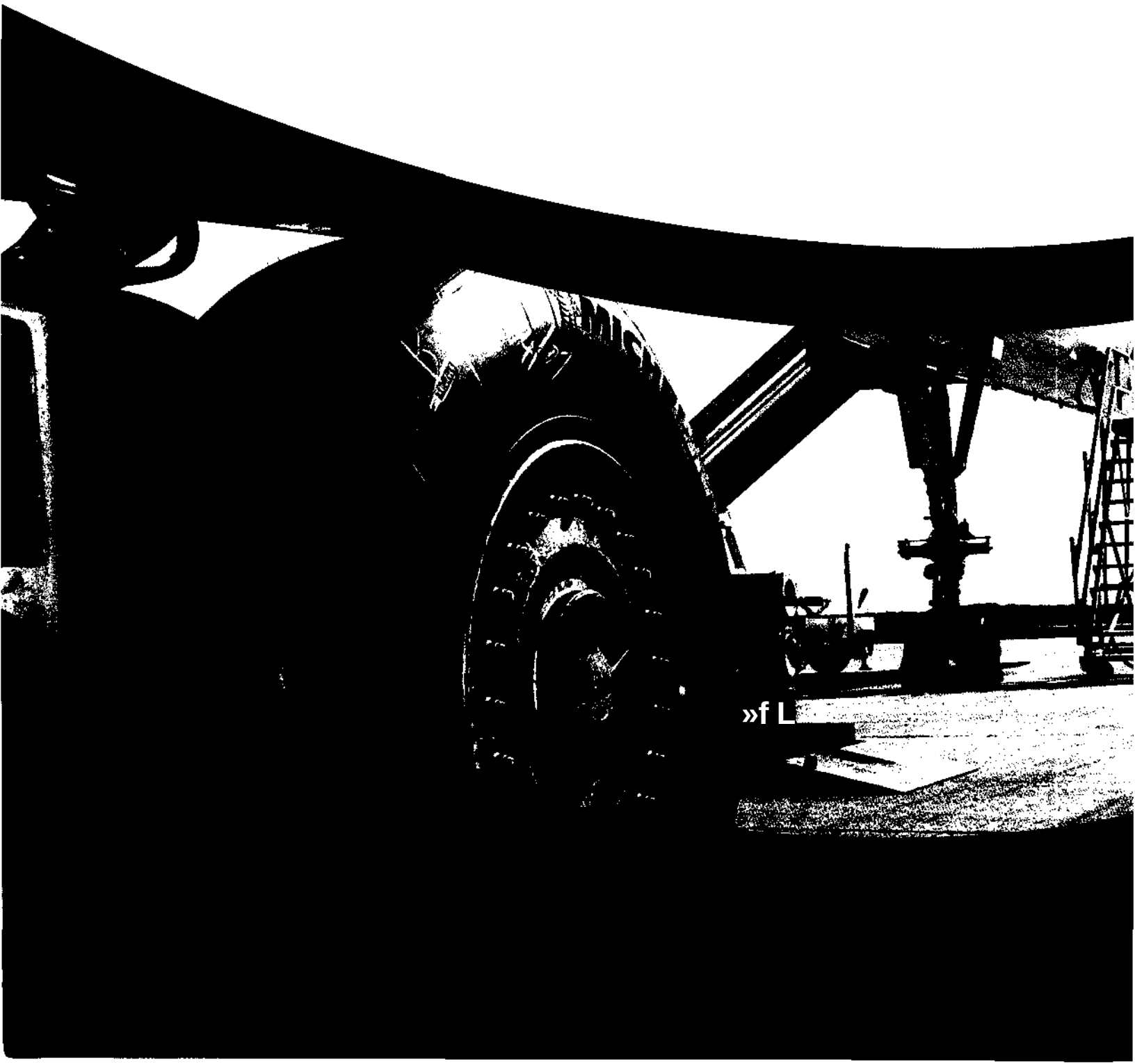
Rather than cutting the sticker price of tires, Michelin is committed to progressively bringing down their overall cost.

For its customers, who represent 15% of the European and North American fleet, the Group offers to take over total responsibility for managing their fleet tire service: supply, fitting, regrooving, retreading. This service comes with round-the-clock assistance service wherever the trucks may be, thanks to partnership agreements with distributors. The results are measured by cost and service quality indicators.

In Europe, this customized offer is based on the "Michelin Fleet Solutions" program and the Michelin Euro Assist service.

Other businesses

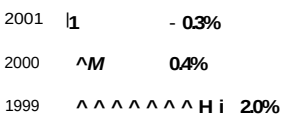
No. 1 in Europe in Agricultural tires
World No. 1 in Aircraft radial tires
World No. 2 in Earthmover tires
No. 2 in Europe in 2-wheel tires
No. 1 in tire distribution in Europe
No. 1 in Europe in tourist publishing



2001 was a year of contrasts. Earthmover and Agricultural tires, wheels and tourist publishing were all affected by the economic downturn. Aircraft tires and 2-wheel tires continued to progress. Distribution activities performed well commercially, thanks to the development of service sales with Euromaster and retreading with TCI in the United States.

Total sales generated by other businesses grew by 2% to €4.9 billion. Operating margin fell to a negative 0.3%. Euromaster and most other tire businesses grew, but, as forecast, the cost of setting up ViaMichelin and the consolidation of external growth operations in Romania and China affected operating results.

Net sales +2%
in millions of euros



Operating margin
in%

The characteristics of the markets

The other tire categories represent 13.5% of the world market in value. While tires for 2-wheels are considered consumer goods, Agricultural, Earthmover and Aircraft tires are highly technical capital goods.

There are major opportunities for growth in radial tires for Aircraft, small and medium-sized earthmovers and agricultural machines.

And while the Wheels and Tire/Wheel Assemblies market continues to grow at a sustained rate in the medium term, it remains dependent on the activity of the manufacturers.

Tourist publications operate in a market which is basically buoyant, but highly competitive. The new electronic services in travel assistance present a strong potential.

Michelin's strategic orientations

The Group is following a strategy of targeted growth in the field of tires. This focuses on the most technical segments of each market, where the Michelin brand is the uncontested leader.

It has developed strong partnerships with manufacturers and, in particular, is working hard to improve the safety of air transport through the "radialization" of aircraft tires.

In the field of Wheels and Tire/Wheel Assemblies, it has chosen the route of partnerships to make up for its absence of critical mass.

In Distribution, the Group places the emphasis on the development of services with high added value, particularly for truck and light vehicle fleets.

Tourist publications are an important vector for the Michelin brand image and contribute to keeping Michelin present in the daily life of consumers. Electronic travel assistance services to facilitate mobility are part of this approach, while intrinsically presenting attractive perspectives for the general public and professionals. Michelin's ambition is to become the European leader.

The size of the principal tire markets based on the worldwide market in value terms

	%
Earthmover	5.6%
2-wheel	4.6%
Agricultural	2.8%
Aircraft	0.5%
Passenger Car-Light Truck / Truck	86.5%

2001 in short

Sales increased by 2%, despite the slowdown in most of the markets.

Our tires increased their market share in all segments: Earthmover, Agricultural, 2-Wheel and Aircraft. Michelin has won an exclusive 15-year aircraft tire supply contract with the US NAVY and the Group has become the top-ranked company in Earthmover tires in South America.

Our Distribution businesses successfully developed their service activities in Europe and retreading in the United States.

The year was outstanding for two technical performances: the launch of the Air X NZG Aircraft tire for Concorde and the launch of the world's biggest tire, the XDR, for Earthmovers. The Group also obtained its first ratification of Aircraft and 2-wheel tires produced by C3M.

In the field of development, a new factory for Agricultural tires was opened in Lexington in the United States.

The Group closed its scooter tire factory in Turin and signed an agreement to set up a joint venture with Tigar in Yugoslavia.

The Wheel businesses were transferred to subsidiaries and Michelin successfully launched its new digital travel assistance services: ViaMichelin.

70% of the world market
in tires for very large Earthmovers

35% of the European market
in Agricultural tires

Other tires

Strong growth in the Earthmover sector

In rapidly shrinking markets, particularly because of the continuing fall in the prices of raw materials (copper, coal, oil), the Group again recorded strong growth in sales. These were helped by the continuation of "radialization", particularly in the small civil engineering and public works segments and the handling equipment segment.
The situation was contrasted between continents: North America fell back substantially in both replacements and original equipment, while the European markets remained stable.

In this context, the Group continued to win market share from its competitors. Despite the negative effects of certain currency parities (yen, Australian and Canadian dollar, South African rand, Turkish lira), the price rises applied to original equipment and replacement tires led to a rise in sales which was higher than the rise in volumes.

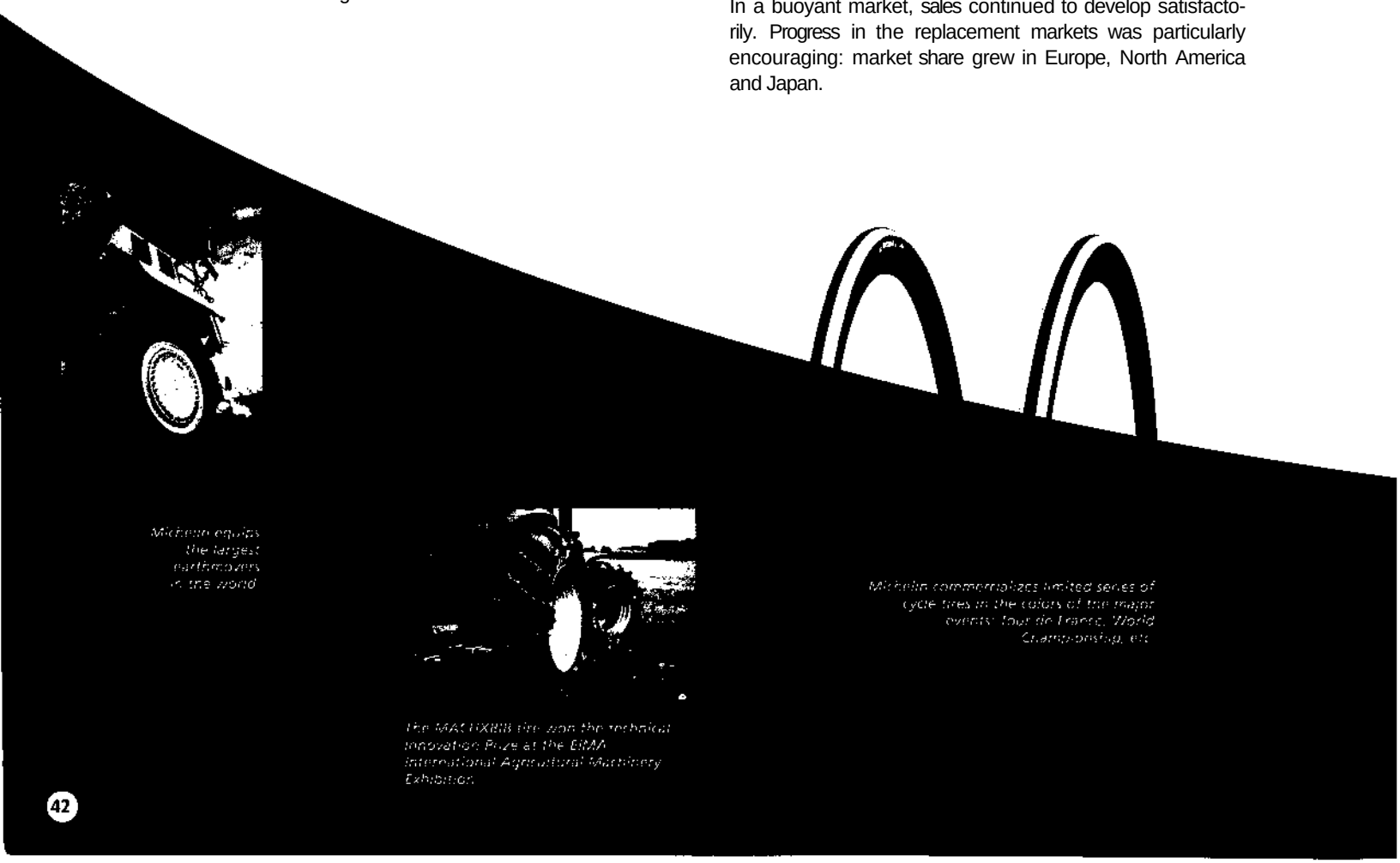
Stability of sales of Agricultural tires in a difficult context

Sales of tires for agricultural machines suffered from the economic situation, the various agricultural crises (BSE and bad weather in Europe, the fall in prices in North America) and the accelerating concentration of farms in Eastern Europe. This uncertain environment prompted many farmers to postpone purchasing. Consequently, the original equipment and replacement markets shrank by 5% or more in these two zones.

With sales stable, the Group recorded new gains in market share in original equipment and replacement in Western Europe, as well as in North America.

Good growth in 2-wheel tires

In a buoyant market, sales continued to develop satisfactorily. Progress in the replacement markets was particularly encouraging: market share grew in Europe, North America and Japan.



Michelin equips the largest earthmovers in the world

The MACHXBIB tire won the technical innovation Prize at the EIMA International Agricultural Machinery Exhibition.

Michelin commercializes limited series of cycle tires in the colors of the major events: Tour de France, World Championship, etc.

Other businesses

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25% of the European market
in Motorcycle and Scooter tires

65% of the world market
in radial Aircraft tires

Although sales of bicycle tires fell, the progress registered by top-range products led to a significant increase in their profitability.
This activity reorganized its industrial facilities, closing the Turin workshop and signing an agreement with Tigar in Yugoslavia. Alongside this, the C3M has started to be used for top-range radial tires for motorcycles and the first ratifications by manufacturers have already been obtained.

Sustained growth in radial tires for aircraft

The slump of over 20% in air traffic after the events of September 11 only made itself felt at the end of the year. The aircraft tire market was not affected in 2001 and was slightly up on the previous year.

Growth was much more significant in the radial tire market, which now represents 15% of the total market.

Michelin, the first company to adapt radial tire technology to Aircraft tires, has pursued its action with determination to promote the "radialization" of the market. The Group firmly believes that improved air transport safety depends on this technology, as well as the experience and quality control that Michelin possesses. The speed with which Michelin successfully developed the Air X NZG tire, which enabled *Concorde* to fly again, is an illustration of this.

The Group's sales were up 20% in radials, with genuine gains in market share.

References

By developing tires for the Segway, Michelin is helping to revolutionize individual urban mobility

Michelin is the exclusive supplier of tire/wheel assemblies for the Segway.

The Segway is a personal means of transport which can achieve a speed of nearly 20 km/h. Running on two tire/wheel assemblies developed by Michelin which act as the suspension, it is powered by an electric motor. Equipped with innovative gyroscopic systems, it is self-balancing and can be steered simply by leaning. Tens of thousands have already been ordered by the US Postal Service for its mail delivery people and by a wide range other companies.

To equip the Segway – a revolutionary vehicle for individual urban transport – Michelin has planned for 200,000 tires in 2002.

The Michelin Group is proud of its major contribution to Concorde's return to the skies.

Other businesses

Euromaster can provide routine maintenance of your car at your home or in the car park of your office.

The compactness of the EVAX axle gives manufacturers more useful space to play with.

Wheels and Tire/Wheel Assemblies

No. 1 in Europe

In the wheel sector, the fall in original equipment in the Truck market and the sluggish growth in the Passenger Car-Light Truck market led to a slowdown in the European market. Sales were down in this activity, which suffers from a lack of critical mass. The necessary control of inventories in this difficult context and the process of adapting to the market requirements led the Group to apply measures involving downsizing and short-time working. In addition, Michelin has transferred this activity to a subsidiary.

The Tire/Wheel Assemblies activity also suffered from this difficult environment.

Tire Distribution

No. 1 in Europe

Euromaster
growth in fleet services

Euromaster is the European leader in Truck tire services and a major player in Passenger Car tire services and basic maintenance of light vehicles. With over 10,000 employees and 1,300 service centers in 9 countries - Germany, Finland, France, Lithuania, the Netherlands, Spain, Sweden, Switzerland and the United Kingdom - Euromaster's annual sales amount to around €1.5 billion.

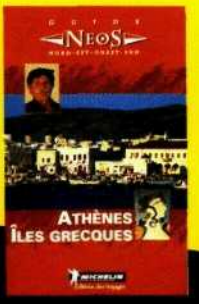
In 2001, the entity continued its reorganization into two units - light vehicles and heavy vehicles - and significantly increased its profitability.

Its sales grew by 2% thanks to the development of service activities, particularly involving truck fleets. Its activities in services for passenger car fleets also developed well, particularly in the United Kingdom, where Euromaster is the market leader. This allowed it to limit the consequences of the slowdown in European replacement markets.

Tire Centers LLC (TCI):
development in retreading

Turnover rose significantly for TCI, despite the slowdown in the Truck replacement market in North America. This sound development is largely due to the growth in retreading.

During the year, the Company moved its headquarters from Akron, Ohio to Greenville in South Carolina.



In 2001, Neos was voted "Best Travel Guide Collection" by specialized journalists.

ViaMichelin's "Business Services" option can be adapted or customized to suit professionals' requirements.

Publishing and travel assistance services

No. 1 in Europe in tourist publishing

Michelin Editions des Voyages

The impact of the downturn in travel

Tourist publications, maps and guides suffered from the slowdown of the world economy. The events of September 11 only aggravated a trend that had started to emerge at the beginning of the year: fewer people traveling in North America, a drop in the number of American tourists visiting Europe and a downturn in travel to areas considered to be dangerous.

Several new features were launched during the year. The NEOS collection was enlarged. The Green Guide publications concerning destinations outside France were modernized. Lastly, new road atlases were developed in all countries in Europe.

However, after the exceptional year of 2000, outstanding because of the Red Guide's centenary and the renovation of the Green Guide collection, 2001 sales figures in volume and value did not grow. Michelin's determination to enhance the value of its products and its favorable product mix, with more atlases and fewer maps, was reflected by improved unit sales prices.

ViaMichelin

a promising launch

Launched in 2001, ViaMichelin designs, develops and sells digital products and services in the travel assistance sector, for general public and professional road users in Europe.

ViaMichelin proposes a complete offer - cartography, itineraries, hotels, restaurants, traffic information, tourism, etc. - available in multi-media formats: Minitel, Internet, mobile telephone, PC CD-ROM, on-board navigation, software for digital personal assistants.

Launched in June, www.viamichelin.fr, the general public site, receives 2 to 3 million visitors every month. It is one of the twenty most-visited sites in France; users regularly rate it in the top five sites for quality.

In September, the offer was enlarged to several services - off the peg or customized - for companies: geolocation of sales outlets, services in mobile telephony and services for transport fleets. Already available in France, the United Kingdom and Spain, the "Business Services" offer will be launched in Germany and Italy in 2002.

The services proposed by ViaMichelin are essentially local tools. This means they were affected to a relatively small degree by the slowdown in the economy.

Sales developed as planned. Global investment is estimated at €100 million for the period 2001/2003, including 1/3 in 2001, and ViaMichelin should turn a profit by 2004.

Financial review

At 6.6%, operating margin for 2001 is in line with the Group's revised target of between 6.2% and 6.8% of sales, set in response to the economic downturn observed in the 1st half.

Sales rose 2.5% in a difficult environment

This performance was achieved in spite of the decline in overall market volumes, estimated at 1.4% in the Passenger Car and Light Truck tire segment and 4.3% in the Truck tire segment. The various factors affecting the Group's sales performance can be summed up as follows:

• Lower volumes eroded sales by 2.6%.

. Exchange rates had a net negative impact of 0.4%. The effect of the fall in value of the Japanese, Brazilian, Argentine and Turkish currencies was partly offset by the strengthening of the dollar, which gained 3% against the euro.

. Changes in price mix fueled 5.4% growth in sales, reflecting increased replacement sales, especially of high value-added tires and flag brands. In addition, the Group succeeded in raising prices throughout the year, in the North and South American Passenger Car and Light Truck tire markets and the European and South American Truck tire markets in original equipment as well as in replacement markets. Similar gains were achieved from quarter to quarter over the entire year.

. Changes in Group structure had a net positive impact of 0.3%. The Shanghai Michelin Warrior (SMW) joint-stock company in China was consolidated as from April and Michelin Roumanie (formerly TOFAN) - acquired at the end of July - was consolidated over the last five months of the year, while manufacturing operations in the Philippines were discontinued in early February.

Operating income down 10.5%

Operating margin contracted by one percentage point to 6.6%. Several factors explain this decline:

. Market share losses in the Truck replacement tire market in North America during the first quarter - which were recovered at the end of the year - and low OEM sales dampened operating income for the year.

• Although raw materials costs declined by 2% year-on-year after climbing 8% in 2000, the fall was concentrated in the second half on the back of a 5% rise in the 1st half. The benefits of the fall in rubber prices and the 3rd-quarter reduction in oil prices will not be fully reflected in cost of sales until 2002.

Growth in 2001 net sales compared with 2000

in millions of euros and %

	2001	%	Q1	%	Q2	%	Q3	%	Q4	%
Total	**+379.0**	**+2.5%**	**+99.7**	**+2.8%**	**+233.7**	**+6.2%**	**+76.0**	**+1.9%**	**-30.4**	-0.7%
Exchange rates	-61.5	-0.4%	+52.3	+ 1.5%	+60.7	+ 1.6%	-47.1	-1.2%	-127.4	-3.1%
Volumes	-403.0	-2.6%	-150.5	-4.1%	-7.2	-0.2%	-114.0	-2.9%	-131.5	-3.3%
Price mix	+802.5	+5.4%	+202.7	+5.8%	+186.6	+4.9%	+240.8	+6.4%	+172.2	+4.5%
Group structure	+41.3	+0.3%	-4.8	-0.1%	-6.5	-0.3%	-3.7	-0.1%	+56.2	+ 1.4%

• In the spring, Michelin radically scaled down production at its plants in North America and Europe to avoid a build-up of inventories and production levels were closely monitored in subsequent months. Although these measures were successful in reducing finished product inventories, the resulting idle capacity costs severely eroded margins.

« The fall in value of certain currencies also had a negative impact on operating income. The weakness of South American currencies had the effect of reducing the earnings contributions of Group operations on this continent, where Michelin is a major player, especially in the truck tire segment.

• Lastly, as expected, operating income for 2001 was charged with the start-up costs of ViaMichelin (€100 million over three years, including one-third in 2001) and of Shanghai Michelin Warrior in China, as well as the effect of acquiring previously loss-making businesses in Romania. In total, these charges trimmed around €50 million from operating income.

Michelin succeeded in cutting operating expenses and the number of employees was also reduced. In addition, the Group achieved strong growth in sales of tires for high-end Passenger Cars and 4x4, as well as in Truck tire services, without making pricing concessions. The resulting positive impact on operating income was not sufficient, however, to fully compensate for the effects of the negative factors described above.

References

Measures to boost Michelin's competitiveness

Since the fall of 1999, Michelin has been implementing a series of measures designed to deliver a 20% improvement in productivity in Europe by the end of 2002. The plan targets a 10% increase in European sales in 3 years and a 10% reduction in costs through the elimination of 7,500 jobs.

As of year-end 2001, sales growth of 3.2% had been achieved and the elimination of 6,430 jobs had been announced. In connection with the plan, several plant closures were announced during the year, including the Stoke and Burnley plants in the United Kingdom, the St Ingbert plant in Germany and the Turin Stora plant in Italy. In France, an early-retirement plan covering the period through 2006 was signed in 2001.

These measures, which are covered by provisions recorded in the 1999 accounts, have enabled Michelin to cope successfully with the effects of rising raw materials costs in 2000 and a combination of higher raw materials costs and weaker market demand in 2001.

In response to the escalation of certain specific costs in North America and the extremely difficult market conditions on that side of the Atlantic, the decision has been made to launch a two-year plan covering 2002 and 2003 to achieve USD 200 million worth of annual savings in structural costs. The plan will cover all aspects of the Group's operations in North America and is expected to lead to the elimination of around 2,000 jobs. The aim will be to strip out unnecessary costs without compromising Michelin's ability to capitalize on future development opportunities. The charges recorded in the 2001 accounts for these measures in North America was €123 million.

Lastly, a charge of €217 million has been recorded in the 2001 accounts for various other measures.

The expected cost savings, over and above those to be derived from the European Productivity Plan, are estimated at €150 million in 2002 and €300 million as from 2003.

Financial review

Operating income by business segment

• Operating income generated by the Passenger Car-Light Truck tire business totaled €711 million, an increase of 21.7% on 2000. Operating margin climbed to 8.9%, reflecting the pay-off from the targeted growth strategy followed in recent years, the initial benefits of the European cost reduction plan and the positive impact of the Group's pricing policy, which puts margins before volumes.

. Operating income generated by the Truck tire business contracted sharply to €343 million. Lower sales in North America throughout the year and in Europe during the fourth quarter, coupled with large-scale production cut-backs and the weakness of South American currencies, fueled a 4.8 point drop in operating margin to 8.8%.

• The "Other Businesses" segment ended the year with an operating loss of €14 million

The improved performances of several of the other tire businesses and Euromaster only partly compensated for the start-up costs of ViaMichelin, the weak profitability of the Wheel business and the costs incurred, as planned, in connection with the Group's external growth operations in China and Romania. In 2002, the new operations in China and Romania will be included in the Passenger Car tire and Truck tire business segments.

Review of expenses by function

At 71.8%, cost of sales declined as a percentage of sales, leaving to a 1 point improvement in gross margin. Selling, general and administrative expenses rose at a faster rate than sales, reflecting the continued high level of selling and development expenditure, as well as the impact of changes in Group structure.

Income statement analyzed by function

in millions of euros

	2001	%	2000	%
Net sales	**15,775**	**100**	**15,396**	**100**
Cost of sales	11,325	71.8	11,207	72.7
Gross margin	**4,450**	**28.2**	**4,189**	**27.3**
Selling, general and administrative expenses	3,409	**21.6**	3,027	19.7
Total operating expenses	14,734	93.4	14,234	92.4
Operating income	**1,040**	**6.6**	**1,162**	**7.6**
Interest income and expense	(321)		(314)	
Income from ordinary activities	**719**		**848**	
Non-recurring income and expenses	(29)		**(76)**	
Income taxes	(330)		(291)	
Net income of fully-consolidated companies	**361**		**481**	
Income (losses) from companies accounted for by the equity method	(13)		**(D**	
Amortization of goodwill	(34)		(42)	
Net income before minority interests	**314**		**438**	
Net income	**296**		**399**	

Note: Cost of sales includes logistics and research costs.

Operating income by business segment

in millions of euros

	Sales			Operating income		Operating margin	
	2001	% of total	**Change**	**2001**	**% of total**	**2001**	**2000**
Passenger Cars-Light Trucks	7,982.2	**50.6%**	+3.8%	711.1	68.4%	**8.9%**	7.6%
Trucks	3,915.3	**24.8%**	**-4.3%**	343.0	33.0%	**8.8%**	13.6%
Other businesses	4,901.2	31.1%	+2.0%	(13.9)	**(1.4%)**	**(0.3%)**	0.4%
Inter-segment eliminations	(1,024)	**(6.5%)**		-			
Total	**15,774.6**	**100%**	**+2.5%**	**1,040.2**	**100%**	**6.6%**	7.6%

Research and development

In 2001, Michelin spent €702 million on research and development, representing 4.4% of sales. The increase, which was greater than the growth in sales, reflects the Group's commitment to continuing to invest in the future, even in a more difficult economic environnement.

In 2001, the R&D effort led to the launch of several new products, including the X One tire, the Air X NZG tire, the Drice tire specially designed to prevent skidding on icy roads, launched in Japan, the MACHXBIB tire, XDR the world's largest earthmover tire, the Entire Solution developed in cooperation with TRW, the IVTM developed with Wabco and the Optimized Contact Patch.

in millions of euros

	2001	2000	1999
Research and developement cost	702	645	589
% of sales	4.4%	**4.2%**	**4.3%**
Increase	+8.9%	+9.5%	N.AV.
Increase in sales	+2.5%	**+**11.9%	**+**10.2%

Decline in net income to €314 million

. Net interest expense rose compared with 2000, due to exchange losses resulting from the fall in value of certain currencies, including the over 30% devaluation of the Argentine peso.

• Income was also charged with net non-recurring expense of €29 million. Profits on asset disposals in the amount of €363 million, corresponding mainly to the gain on sale of a 2.8% interest in Peugeot SA, were canceled out by restructuring and other charges totaling €312 million.

• The decline in net income stemmed primarily from the increase in income taxes. Income taxes for 2001 represented 51.2% of pre-tax income versus 39.9% in 2000. The Group's extremely high-effective tax rate reflects the impact of Michelin's policy of strictly complying with accounting principles regarding the recognition of deferred tax assets.

Lower capital expenditure, in line with objectives

Additions to property, plant and equipment and intangible assets, excluding the fixed assets of newly-acquired businesses, totaled €1,150 million, representing 6.9% of sales versus 7.1% in 2000. The 0.2 point reduction was in line with the target set in April 2001, when the first signs of an economic slowdown appeared.

Maintenance expenditures, including the cost of molds, represented around 40% of the total. The balance was mainly spent on converting Passenger Car tire capacity to the production of 17" and larger tires, and on productivity enhancement programs, mainly in the Truck tire business.

References

Other Businesses

The "Other Businesses" segment comprises all other manufacturing and sales operations which, taken alone, represent less than **10%** of consolidated sales.
They include:

• Earthmover, Agricultural, Motorcycle, Bicycle and Aircraft tires

» Euromaster distribution operations in Europe and TCI distribution operations in the United States

• Road-holding activities, including wheels

• Tourism services, including maps and guides and the ViaMichelin service.

The contribution of these businesses to Group earnings varies significantly, according to the level of capital employed. For example, the distribution businesses generate lower operating margins than the manufacturing businesses, but they also tie up less capital.

Financial review

Tight control over working capital and a stable debt position

• The drive to reduce inventories launched in March paid off well. At December 31, 2001, inventories amounted to €3,302 million, down 7.4% on the year-earlier figure, representing 20.9% of sales versus 23.2% in 2000.

Trade receivables also declined, providing another illustration of the Group's successful efforts to control working capital.

Decreases in these two items fueled a €102 million reduction in working capital compared with December 31, 2000, excluding the effect of changes in Group structure and exchange rates.

. The reduction in working capital - reflecting decreases in inventories and trade receivables - and the proceeds from the sale of Peugeot SA shares fueled a significant increase in free cash flow to €309 million.

• Total long and short-term debt was cut by 3.4% or €169 million, excluding the effect of changes in Group structure and exchange rates. The proceeds from the June 2001 sale of the Group's 2.8% interest in Peugeot SA were used to pay down debt.

In response to the uncertain economic conditions, in October the Group extended the life of its debt by drawing down $905 million from the bank tranche of the subordinated line of credit set up in 2000 and using the funds to repay short-term borrowings. The contingent tranche of $170 million has not been utilized.

The breakdown of borrowings between fixed and floating rate debt and by currency was largely unchanged at December 31, 2001 compared with the previous year-end.

Structure of long and short-term debt

	Total	Due within 1 year	Due in 1 to 5 years	Due in more than 5 years
At June 30, 2001	100%	60.7%	33.6%	5.7%
At December 31, 2001	100%	47.8%	28.6%	23.6%

Long and short-term debt at December 31

in millions of euros

	2001	2000	1999
Net debt	4,881	4,926	4,329
Shareholders' equity	4,326	4,155	3,838
Net debt-to-equity ratio	1.13	1.19	1.13

Compagnie Générate des Etablissements Michelin

The parent company of the Group, Compagnie Générale des Etablissements Michelin, ended the year with net income of €452,871,105.91, an increase of €189.2 million compared with €263,620,238.61 in 2000.

Operating income contracted by €24.2 million despite royalty revenues up €28.7 million. Operating expenses also increased, however, to €274.8 million from €221.9 million in 2000, mainly as a result of a €40 million rise in research and motor sport expenditures.

Net interest and other investment income expanded by €200 million to €363.4 million, including €199.2 million in interim dividends receivable from its subsidiary Pardevi.

Income from ordinary activities totaled €452.9 million versus €277.2 million in 2000.

Net non-recurring income amounted to €0.3 million, significantly below the 2000 figure which included the reversal of an allowance for impairment in value of Manufacture Francaise des Pneumatiques Michelin shares.

Income tax for 2001 amounted to €415.485.
The decrease compared with 2000 stemmed in part from the decline in operating income. In addition, the netting off of the income and losses of companies in the Michelin tax group gave rise to a tax benefit in 2001 which was recorded in the accounts of the Company. The increase in net interest and other investment income had no impact on the tax charge because the Pardevi interim dividend and other dividend income are exempt from tax.

The Company's shareholders' equity increased by €133.6 million in 2001, before taking into account net income for the year, corresponding to undistributed income for 2000 credited to retained earnings by decision of the May 18, 2001 Annual Shareholders' Meeting.

Ten-year key figures and ratios

In millions of euros	2001	2000	1999 *pro forma*
Sales	15,775	15,396	13,763
% change	2.5%	11.9%	10.2%
Average number of employees	127,467	128,122	130,434
Payroll costs	5,242	5,137	4,756
% of sales	33.2%	33.4%	34.6%
EBITDA (1)	2,091	2,170	2,127
Operating income	1,040	1,162	1,207
Operating margin (2)	6.6%	7.6%	8.8%
Net interest expense	(321)	(314)	(238)
Non-recurring items, net	(29)	(76)	(353)
Including restructuring costs (excluding provisions)	*(340)*	*(67)*	*(388)*
Income before tax	644	729	538
Income taxes	(330)	(290)	(213)
Effective tax rate	51.2%	39.9%	39.7%
Net income including minority interests	314	438	325
Net margin	2.0%	2.8%	2.4%
Dividends (21)	105	93	87
Net cash provided by operating activities (3)	1,263	1,017	1,014
Cash flow (4)	1,323	1,416	1,547
% of sales	8.4%	9.2%	11.2%
Capital expenditure (20)	1,150	1,201	1,252
% of sales	7.3%	7.8%	9.1%
Capital expenditure, net of disposals	1,089	1,091	1,003
Acquisitions of investments, net of disposals	(184)	166	255
Research and development costs	702	645	589
% of sales	4.4%	4.2%	4.3%
Net debt (5)	N.APP.	N.APP.	N.APP.
Average borrowing costs (6)	6.07%	6.54%	9.4%
Shareholders' equity including minority interests (7)	4,326	4,155	3,838
Debt-to-equity ratio	N.APP.	N.APP.	N.APP.
Net debt + securitizations (8)	4,881	4,926	4,329
Debt-to-equity ratio including securitizations	113%	119%	113%
EBITDA/Net debt	41%	43%	47,2%
Net cash provided by operating activities/Net debt	30.6%	20.7%	23.4%
Interest expense (9)	311	324	419
Interest cover (Operating income/interest expense)	3.3	3.6	2.9
Free Cash flow (10)	309	(241)	(300)
ROE (11)	7.4%	10.4%	8%
Target RAROC (12)	10.7%	11.4%	11.2%
Actual RAROC (12)	6.8%	8.3%	5.3%

Per share data

	2001	2000	1999 pro *forma*
Net assets per share (13)	29.7	28.5	26.2
Basic earnings per share (14)	2.20	2.96	2.10
Diluted earnings per share (15)	2.20	2.96	2.10
P/E (16)	17	13	19
Net dividend per share	0.85**	0,80	0.71
Pay-out rate (17)	38.6%**	27.0%	34.2%
Net dividend yield (18)	2.3%**	2.3%	1.7%
Capital turnover rate (19)	108.3%	96.6%	104.7%

1999*	1998*	1997*	1996*	1995*	1994*	1993*	1992*
13,763	12,486	12,149	10,861	10,078	10,248	9,650	10,191
10.2%	2.8%	11.9%	7.8%	(1.7%)	6.2%	(5.3%)	(1.2%)
130,434	127,241	123,254	119,780	114,397	117,776	124,575	130,686
4,684	4,359	4,110	3,786	3,698	3,870	4,004	4,172
34.0%	34.9%	33.8%	34.9%	36.7%	37.8%	41.5%	40.9%
2,138	1,875	1,869	1,742	1,474	1,365	1,019	1,335
1,233	1,073	1,094	1,060	869	725	306	649
9.0%	8.6%	9.0%	9.8%	8.6%	7.1%	3.2%	6.4%
(245)	(220)	(229)	(214)	(261)	(276)	(419)	(411)
(353)	46	20	(129)	11	(83)	(434)	34
(66)	*000)*	*(119)*	*(67)*	*(76)*	*(161)*	*(283)*	*(88)*
SSI	881	866	681	601	351	(560)	143
(374)	(308)	(239)	(207)	(150)	(143)	(43)	(145)
67.2%	34.9%	27.6%	30.3%	24.9%	40.8%	N.APP.	N.APP.
182	574	627	474	451	208	(603)	(2)
1.3%	4.6%	5.2%	4.4%	4.5%	2.0%	N.APP.	N.APP.
87	137	112	80	57	0.6	29	7
1,034	1,079	1,380	1,032	N.AV.	N.AV.	N.AV.	N.AV.
1,548	1,246	1,284	1,274	664	684	184	784
11.2%	10%	10.6%	11.7%	6.6%	6.7%	1.9%	7.7%
1,252	1,174	996	800	567	397	490	654
9.1%	9.4%	8.2%	7.4%	5.6%	3.9%	5.1 %	6.4%
1,134	1,090	818	627	471	268	422	518
N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV
N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
N.APP.	N.APP.	N.APP.	N.APP.	N.APP.	N.APP.	N.APP.	N.APP.
3,798	2,752	2,564	3,480	3,994	4,311	5,361	5,312
9.4%	12.7%	13.6%	10.9%	10.1%	11.5%	11.7%	11.7%
4,294	4,208	3,955	2,656	1,974	1,439	1,215	1,836
88%	65%	65%	131%	202%	300%	441 %	289%
4,474	3,274	3,121	3,800	4,256	4,555	5,361	5,312
104%	78%	79%	143%	216%	317%	441%	289%
47.8%	57.2%	59.9%	45.8%	34.6%	30%	19%	25.1%
23.1%	32.9%	44.2%	27.2%	N.AV.	N.AV.	N.AV.	N.AV.
419	416	425	415	430	525	627	623
2.9	2.6	2.6	2.6	2.0	1.4	0.5	1.0
(413)	(90)	465	510	74	383	(201)	183
3.9%	13.7%	16.2%	18%	23.6%	14.8%	N.APP.	0.7%
11.2%	11.7%	11.9%	N.AV.	N.AV.	N.AV.	N.AV.	N.APP.
5.3%	10.5%	12.1%	N.AV.	N.AV.	N.AV.	N.AV.	N.APP.

1999*	1998*	1997*	1996*	1995*	1994*	1993*	1992*
29.5	28.3	26.8	20.3	15.6	12.3	10.4	15.8
N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.	N.AV.
N.APP.	N.APP.	N.APP.	N.APP.	N.APP.	N.APP.	N.APP.	N.APP.
0.71	0.64	0.58	0.50	0.42	0.34	No dividend	0.23
62.6%	16.4%	12.6%	13.4%	11%	18.8%	N.APP.	202.5%
1.7%	1.4%	1.1%	1.4%	1.3%	1%	N.APP.	0.8%
104.7%	102.3%	106.1%	86.2%	74.1%	87.4%	86%	82.4%

**Former accounting stdnddrds.*
** *Based on recommended dividends*

1 EBITDA: earnings before interest, tax, depreciation and amortization.
2. Operating margin: operating income as a % of net sales.
3. Net cash provided by operating activities: cash flow + change in working capital.
4. Cash flow: net income before minority interests + depreciation, amortization and charges to allowances for impairment in value of fixed assets - changes in provisions and deferred taxes -/+ net gains/losses on disposals of assets.
5. Net debt: long and short-term debt - cash and cash equivalents.
6. Average cost of debt.
7. Shareholders' equity including minority interests: common stock + paid-in capital in excess of par + retained earnings + net income + minority interests.
8. Securitization: sales of trade receivables. In cases where the receivables are sold to special purpose entities in which Michelm holds an equity interest, the special purpose entity is consolidated in accordance with the accounting standards applicable since January 1, 2000.
9. Interest expense: borrowing costs for the year.
10 Free cash flow: cash flow - change in working capital - net capital expenditure.
11. ROE: net income / shareholders' equity.
12. RAROC: see additional information.
13. Net assets per share: net assets/ number of shares outstanding at December 31.
14. Basic earnings per share: net income / weighted average number of shares outstanding during the year + own shares - shares canceled during the year.
15 Diluted earnings per share. earnings per share adjusted for the effect on net income and on the weighted average number of shares of the exercise of outstanding dilutive instruments.
16. P/E: Share price at December 31 / earnings per share.
17. Pay-out rate: net dividend / earnings per share.
18. Net dividend yield: net dividend / share price at December 31.
19. Capital turnover: number of shares traded during the year / average number of shares outstanding during the year.
20. In 2001, excluding external growth transactions (SMW, €167 million).
21. Dividends: dividends distributed during the year. For years prior to 1999, the amount shown corresponds to total amounts distributed during the year.

N.APP: not applicable
N.AV.: not available
N.D.: not disclosed

Outlook

For 2002, economic conditions look to be just as challenging as those experienced in 2001. The 1st half is already shaping up like a continuation of last year, and visibility on the 2nd half is low enough that the Group cannot afford to let up on its constant vigilance.

Procurement costs are not expected to decline by more than 1% during the year. However, because it takes 3 to 6 months for purchasing costs to show up as "cost of sales", Michelin's earnings will be boosted throughout the year by the decline in raw materials prices that began in the 2nd half of 2001.

Oil prices should stabilize at $22 per barrel on average over the year and the euro should trade in the region of $0.90.

Amid the current uncertain environment, the long-term structural changes made in the Group's organization will help improve its financial performance:

- further rationalization in Europe and North America will scale back the cost structure substantially. Specifically, the Group plans to save an additional €25 million in Europe, over and above the target set in the 1999 plan, and $125 million in North America;
- a great deal of progress was made in 2001, which will continue to ensure a better match between inventories and expected market demand.

Based on these factors, the Group aims to achieve a 2002 operating margin of between 6.7% and 7.4%.

Proposed resolutions

Shareholders are invited to approve the transactions reflected in the Company's income statement and balance sheet, as well as the proposed appropriation of net income for the year in the amount of €452,871,105.91.

Out of this amount, €3,139,441.47 will be attributed to the General Partners, in accordance with the bylaws. The balance of €449,731,664.44 plus retained earnings of €45,587,019.80 brought forward from 2001, representing a total of €495,318,684.24, is available for distribution to shareholders.

In order to further increase the dividend, we are asking shareholders to approve a total distribution of €136,642,666.05. After setting aside €22,134,174 for the payment of the *précompte* dividend equalization tax, the dividend per share would amount to €0.85. For shareholders entitled to the 50% *avoir fiscal* tax credit (€0.43), the total revenue per share would be €1.28.

If approved, the dividend will be paid as of May 22, 2002 and the Company's shares will be quoted ex-dividend as of that date.

The balance of income available for distribution - €358,676,018.19- would be appropriated as follows: €315,163,220.11 to the special long-term capital gains reserve and €43,512,798.08 to unappropriated retained earnings.

Dividends on shares held in treasury stock on the ex-dividend date will be credited to retained earnings.

The following table shows dividend payments for the last three years:

		Total revenue per share					
		"A" Series common shares (1)			"A" Series participating shares and "B" series shares (1)		
Year	Dividends paid (in euros)	Dividend	Tax credit	Total revenue	Dividend	Tax credit	Total revenue
1998	88,145,658.72	0.66	0.33	0.99	0.64	0.32	0.96
1999 (2)	95,648,269.83	–	–	–	0.71	0.36	1.07
2000	107,772,698.40	–	–	–	0.80	0.40	1.20

(1) Combined in a single class on June 75, 1999.
(2) After cancelling 3 million shares.

Shareholders are also invited to approve the consolidated financial statements, which show net income of €313,944,147.32 versus €438,363,113.90 the previous year.

During the year, the Managing Partners used the shareholder authorizations to trade in the Company's shares, by purchasing 568,594 shares at an average price of €33.90 and selling 281,812 shares at an average price of €41.82.

The Templeton Group holds over 5% of the Company's capital and voting rights. Société Générale, which also holds over 5% of the voting rights, notified the Company during the year that its interest in the capital had been reduced to below 5%.

As in prior years, we are asking shareholders for an eighteen-month authorization to buy back up to 10% of the Company's capital on the market. The authorization would be used to stabilize the Company's share price, or to acquire shares for remittance in exchange for shares of another company in connection with a stock-for-stock public tender offer or a private transaction, or for allocation on redemption, conversion, exchange or exercise of share equivalents, or in payment of dividends, or for allocation on exercise of stock options granted to employees of the Company or of other Group companies, or in connection with employee stock ownership plans. Alternatively, the shares acquired under the authorization could be cancelled to enhance the Company's net assets or earnings per share, pursuant to a separate authorization given at the Extraordinary Shareholders' Meeting of June 11, 1999.

The shares could be purchased, sold, exchanged or transferred at any time, on the market or in over-the-counter transactions or otherwise, by any appropriate method including in the form of block sales, or as the underlying for options or other derivative instruments.

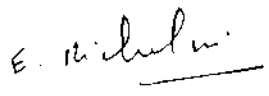
Shareholders are asked to adjust the maximum and minimum prices set in the previous authorization, by setting the maximum purchase price at €60 and the minimum sale price at €40.

Lastly, shareholders are asked to increase the total annual fees awarded to the Supervisory Board to €100,000.

We invite shareholders to approve the resolutions tabled at the meeting, after giving due consideration to the reports of the Auditors and the Supervisory Board.

In application of the terms of the bylaws, Mister François Michelin will be retiring at the Annual Shareholders' Meeting to be held on May 17. We will use the opportunity of the Meeting to pay tribute to his achievements.

Clermont-Ferrand, February 22, 2002



Edouard MICHELIN

François MICHELIN

RenéZINGRAFF

Report of the Supervisory Board

To the Shareholders,

The business and financial performance of the Company in 2001 is presented in the report of the Managing Partners and the accounting and financial documents sent to shareholders. We have no comments to make on the Auditors' Report on the financial statements for the year ended December 31, 2001.

The Group ended the year with net income of €314 million before minority interests and €296 million after minority interests, versus €438 million and €399 million respectively for 2000.

The decline was due to the particularly unfavorable economic conditions in North America and worldwide in 2001. The Group resisted this downturn better than some of its competitors thanks the strategy implemented by the Managing Partners combined with tight control over the Group's businesses.

The Managing Partners' recommendation to increase the dividend clearly demonstrates their confidence in the Company's future as well as a desire to increase the portion of net income distributed to shareholders. We share the Managing Partners' confidence in the future of the Group, which is in a sound financial condition, and support the recommended increase in the dividend.

One of the Supervisory Board's major functions is to assess and monitor changes in Michelin's main financial and management indicators, based on management reporting data. We also discuss the Company's results and strategy with the Managing Partners and invite members of senior management to make presentations on important current issues. All of this information is used to assess the proportion of net income which should be distributed to shareholders.

The five-member Supervisory Board also performs the functions generally delegated to a Remunerations Committee. For example, we reviewed the conditions of the planned employee stock ownership and stock option plans as well as various assumptions relating to variable compensation. Our role in this regard is generally to advise the Managing Partners and more particularly to analyze increases in the number of shares outstanding due to the implementation of employee stock ownership and stock option plans.

In 2002, we intend to look more closely at audit issues. In this case also, the work that would generally be performed by an Audit Committee is carried out directly by all the members of the Supervisory Board, working together.

Finally, Mister Frangois Michelin's term of office as Managing Partner is due to expire at this meeting. We would like to take this opportunity to pay tribute to his achievements in building our Company into a global player respected by its competitors, appreciated by customers and which is the pride of its employees.

We support the proposals put before the Annual Shareholders' Meeting and recommend that shareholders adopt the corresponding resolutions.

Clermont-Ferrand, March 7, 2002

Eric BOURDAIS de CHARBONNIERE
Chairman of the Supervisory Board

List of directorships and other functions held in other companies by the Managing Partners

Francoïs MiCHEUN *(V*

Managing Partner *@)*	Manufacture Franchise des Pneumatiques Michelin
Managing Partner	Compagnie Financière Michelin
General Partner	Michelin Reifenwerke KGaA
Member of the Supervisory Board	Peugeot S.A.
Chairman and Chief Executive Officer	Participation et Développement Industriels S.A. "Pardevi".

(1) Term of office expiring at the Annual Shareholders' Meeting to be held on May 17, 2002.
(2) Term of office expiring at the Annual Shareholders' Meeting to be held on May 6, 2002.

Ecioiiard IVtiCBEUN

Managing Partner	Manufacture Frangaise des Pneumatiques Michelin
General Partner	Compagnie Financière Michelin

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Managing Partner	Manufacture Francaise des Pneumatiques Michelin
General Partner	Compagnie Financière Michelin
General Partner	Michelin Reifenwerke KGaA

Additional Information

In a rapidly changing global environment, shaped by volatile financial markets and constant advances in financial techniques, the mission of the Corporate Treasury department is to:

« Raise financing for the Group as a whole and the individual Group companies on the best possible terms.
• Identify, measure and hedge financial risks, in close cooperation with the operating entities.

Hedging activities are designed to provide the most cost-effective solution to minimizing the impact on Group earnings of changing conditions in the financial markets, the aim is to reduce the amount of capital required to manage these financial risks. The Group does not carry out any speculative transactions on the financial markets.

1. Market risks

Currency risks

Transactionrisk

Corporate Treasury is responsible for:

• netting as many intercompany transactions as possible, through a captive factoring company which pools intercompany payments and through financial services provided to subsidiaries by Compagnie Financiere Michelin,
• systematically hedging all net positions remaining after this process.

In certain exceptional cases, it is not possible to hedge an exposure in a given currency because no counterparty to the hedging transaction can be found or because the cost would be disproportionately high.

The assets of subsidiaries are financed by equity capital, as explained below, and by borrowings in their operating currency. Exceptionally, the assets of subsidiaries operating in countries where inflation is running at more than 10% per year may be financed in hard currency - preferably the US dollar - if real interest rates are excessively high. These financing operations are arranged at Group level and are closely monitored.

Translationrisk

Net investments in subsidiaries are financed in the local currency of the holding company. Future cash flows from these long-term investments (dividends, fees for R&D services and trade mark licenses, injections of capital) are hedged on a selective basis according to the probability of the cash flows occurring. Investments that are intended to be sold are generally financed in the local currency of the subsidiary concerned.

The following table shows the breakdown of consolidated shareholders' equity at December 31, 2001 by currency:

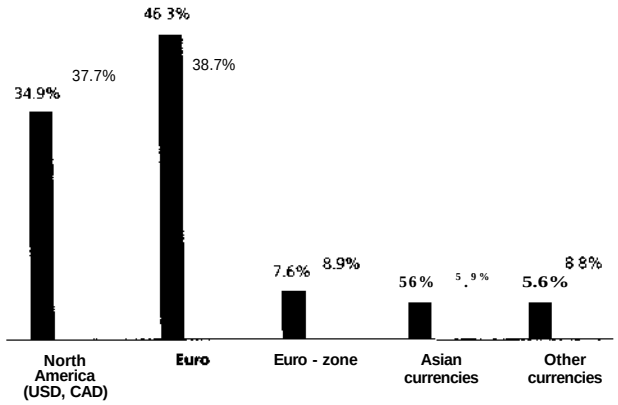
in millions of euros

Currencies	Shareholders' equity + minority interests
EUR	3,247.7
CHF	-791.6
USD	514.7
GBP	170.0
CAD	342.2
Other currencies	842.9
Total	**4,325.9**

Strategic currency risk

Strategic currency risk results from the fact that certain manufactured products are sold outside the country of manufacture. It represents a competitiveness risk which affects the value-added generated by the products, depending on which way exchange rates move.

Unlike currency risks associated with transactions and investments in foreign subsidiaries, strategic currency risk is not generally hedged. However, as can be seen from the following charts, sales and added costs are fairly evenly balanced by currency, providing the Group with a relatively high level of protection against strategic currency risk.



Added costs: payroll cost and other operating expenses
Sales

Interest rate risk

The Group is exposed to interest rate risks on borrowings, due to changes in interest rates in the countries in which it operates.

The Group follows a practical approach to managing these risks.

Long-term positions are managed by the Corporate Finance department. Short-term positions are managed at the level of the individual countries, under the supervision of the Corporate Finance department which closely monitors compliance with the exposure limits set for each country.

The following table provides details of the Group's interest rate positions by currency. The data are based on an analysis, by company and by currency, of intercompany and external borrowings net of intercompany loans, after taking into account swaps and other derivative instruments used to convert interest rate positions.

At December 31, 2001, around one-third of the Group's net debt was at fixed rates of interest.

In millions of euros

Currencies	Net Debt		
	Floating rate	Fixed rate	Average life of long-term fixed rate debt
Euro and euro-zone currencies	-541.6	326.3	**4.3**
CHF	986.2	74.3	**2.4**
GBP	471.3	0.1	**2.0**
USD	1,466.0	1,106.0	**5.0**
CAD	92.4	1.1	**1.8**
Other currencies	829.6	69.8	
Total	**3,303.9**	**1,577.6**	**4.6**

Commodity risk

The Group is exposed to commodity risks during the period in which commodity price rises cannot be passed on in the sale price of manufactured products. This period varies depending on the market and the level of competition, but is generally less than one year.

The net position corresponds to the number of days' sales represented by inventories and firm purchase commitments (long position) less the number of days required to pass on the price rises in sales prices (short position).

In order to keep earnings volatility to a minimum, hedges are put in place when all of the following conditions are met:

< the decision has been made to hedge commodity risk on a recurring basis,
• an organized market exists for the commodity concerned,
• the period required to pass on the price rise can be determined reliably and is reasonably consistent.

At December 31, 2001, no hedges of commodity risks were outstanding.

2. Credit risk

In the normal course of business, Michelin grants credit to its customers in the form of extended payment terms.

The Credit department, which forms part of the Corporate Finance department, sets the maximum payment terms and customer credit limits to be applied by the operating entities.

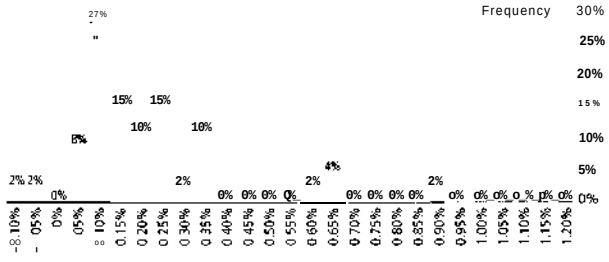
The Credit department is responsible for:
• analyzing and managing credit risks,
* avoiding collection delays,
• critically reviewing proposals by operating entities to grant extended credit to specific customers or to raise a customer's credit limit,
. billing late interest where appropriate.

During 2001, the Credit department stepped up its monitoring of credit and collection processes, in response to the marked deterioration in economic conditions. The department focused primarily on monitoring large exposures, speeding up collection processes and modernizing information systems.

At December 31, 2001, the Group's total trade receivables amounted to €3.4 billion, spread between OEM customers and after-market customers (replacement sales).

Receivables from the Group's ten largest customers, each accounting for over 0.9% of total receivables[1], amounted to €626 million. As of December 31, 2001, thirty customers had credit limits in excess of €10 million.
Bad debt write-offs for the Group as a whole, net of movements in allowances, amounted to €27.65 million in 2001, representing 0.175% of sales.

The following graph provides a bi-monthly analysis of bad debt write-offs and net charges to allowances for the period 1995/2001. Average annual losses over this period represented 0.184% of sales and the volatility rate was 0.07%.



Distribution of the frequency of bad debts and net charges to allowances compared with prior year sales, for the period from December 31, 1994 to December 31, 2001

(1) i.e. €30 million.

3. Liquidity risk

The Corporate Finance department is responsible for ensuring that the Group's liquidity position is satisfactory at all times, by efficiently managing cash reserves and putting in place financing for appropriate periods on legal terms that guarantee the availability of the necessary funds when required.

The Corporate Finance department also arranges confirmed lines of credit offering the Group the required flexibility in terms of financing, taking into account the nature of Michelin's businesses.

The long-term debt figures presented in this report do not include any credit facilities that could be withdrawn or become immediately repayable if the Group's financial ratios were to fall below a certain level or following a material adverse change in the Group's financial position or credit rating.

Compagnie Générale des Etablissements Michelin, Compagnie Financière Michelin and Manufacture Franchise des Pneumatiques Michelin obtained credit ratings for the first time in 2001. These ratings will make it easier for the Group to raise funds on the financial and capital markets.

At December 31, 2001, the three companies' ratings were as follows:

		CGEM [1]	CFM [2]	MFPM G)
Short-term	Standard & Poor's	A2	A2	A2
	Moody's	P2	P2	P2
Long-term	Standard & Poor's	BBB	BBB+	BBB+
	Moody's	Baa2	Baal	Baa1
Outlook	Standard & Poor's	Stable	Stable	Stable
	Moody's	Stable	Stable	Stable

Analysis of the Group's liquidity position

in millions of euros

	At December 31, 2001
Total long and short-term debt	5,821
Portion due in more than one year	3,039
Portion due within one year	2,782
Liquid funds	939
Long-term confirmed lines of credit	2,293

In order to anticipate the probable effects of the September 11 terrorist attacks on the global economy, which was already losing momentum, in October 2001 Compagnie Financière Michelin drew down $905 million on the 12-year subordinated line of credit established in 2000, in order to repay a series of short-term borrowings and cancel various available, undrawn confirmed lines of credit.

The long-term portion of Group debt breaks down as follows: 55% due in 1 to 5 years, 11 % due in 5 to 10 years and 34% due beyond 10 years.

(1) Compagnie Gènèrale des Etablissements Michelin
(2) Compagnie Financiere Michelin.
(3) Manufacture Franchise de Pneumatiques Michelin
Capital ties between these three Group companies are presented in the simplified organization chart on the inside cover of this report

Value creation

Since 1993, Michelin has set internal value creation targets. To determine whether the Group is creating value, the actual risk-adjusted return on capital ("Actual RAROC", corresponding to net income before net interest expressed as a percentage of capital employed) is compared with the target risk-adjusted return on capital ("Target RAROC", corresponding to the cost of economic capital and debt, expressed as a percentage of capital employed). If actual RAROC is greater than target RAROC, the Group considers that it has created value.

Value creation is measured by the Free Cash Flow to Economic Capital method. This method consists of allocating a portion of economic capital and debt to each asset, based on the level of risk associated with the asset. The change in the level of risk over time is taken into account by basing the calculation on the net book value of assets, after depreciation and amortization.

Economic capital and debt are allocated to the various categories of risk-weighted assets as follows:

	Economic capital	Allocated debt
Goodwill and other intangible assets	100%	**0%**
Property, plant and equipment and investments	50%	**50%**
Working capital (inventories, trade receivables, etc.)	25%	**75%**

The Group has set as its target a high after-tax return on economic capital of 15%, based on euro interest rates. Using this overall target as a starting point, separate targets are then set for each country, taking into account differences in interest rates and risks. The average required rate of return for 2001, all currencies combined, was 16%.

This approach ensures that the Group systematically takes into account shareholder expectations by using economic capital allocation techniques as a basis for operating decisions - concerning for example capital expenditure, customer credit limits and the outsourcing of certain activities. However, this is only one of the criteria applied to assess investment projects.

To measure value creation, target risk-adjusted return on capital ("Target RAROC") - corresponding to the calculated cost of debt and economic capital expressed as a percentage of capital employed - is compared with actual risk-adjusted return on capital ("Actual RAROC"), corresponding to net income before interest expense, also expressed as a percentage of capital employed. Michelin's economic performance corresponds to the difference between these two rates.

The approach is rolled down to the level of each Group business, based on the assets used by the business concerned.

In 2001, target and actual RAROC were calculated as follows:

Economic Capital: €4,592 million

in millions of euros

Capital employed *(calculation performed separately for each country)*	**Amount**	**Economic capital**	**Allocated debt**
Goodwill and other intangible assets	419.7	419.7	-
Property, plant and equipment* and investments	7,291.2	3,645.6	3,645.6
Net working capital	2,106.7	526.7	1,580.1
Total		**4,592.0** W	**5,225.7 0**

* including commitments under non-cancellable operating leases included in off-balance sheet commitments.

Capital employed = (1) + (2) = 4,592.0 + 5,225.7 = €9,817.7 million

Weighted average internal cost of economic capital: 16%

Weighted average cost of debt: 6.1 %

Determination of target RAROC:

$$\frac{\text{(Economic capital x weighted average cost of economic capital) + (Allocated debt x weighted average cost of debt)}}{\text{Capital employed}}$$

i.e $\frac{(4{,}592.0 \times 16\%) + (5{,}225.7 \times 6.1\%)}{9{,}817.7} = 10.73\%$

Determination of actual RAROC:

$$\frac{\text{Net Income before interest}}{\text{Capital employed}}$$

i.e $\frac{(313.9 + 350.7)}{9{,}817.7} = 6.8\%$

In 2001, actual RAROC was 3.9 points below target RAROC.

The results achieved by Michelin over the last five years, determined using the method described above, are as follows:

	1997	1998	1999	2000	2001
Economic capital	3,397.8	3,680.3	4,053.2	4,429.9	4,592.0
Weighted average cost of economic capital	16.9%	17.0%	17.0%	16.3%	16%
Allocated debt	3,912.5	4,206.1	4,675.5	5,183.1	5,225.7
Weighted average cost of debt	7.6%	7.0%	6.1%	7.2%	6.1%
Capital employed	7,310.3	7,886.4	8,728.7	9,613.0	9,817.7
Target RAROC	**11.9%**	**11.7%**	**11.2%**	**11.4%**	**10.7%**
Net income	626.7	573.7	182.5	438.4	313.9
Interest expense	258.8	255.0	281.5	358.2	350.7
Actual RAROC	**12.1%**	**10.5%**	**5.3%**	**8.3%**	**6.8%**

The return on economic capital used by the Group may be viewed as high by certain investors. The following table shows target RAROC calculations for 2001 using average rates of return on economic capital of 12%, 13% and 14% (based on euro interest rates) as opposed to the 15% rate used by Michelin. These calculations are provided for information only and are not applied by the Group.

Weighted average cost of economic capital (based on euro interest rates)	**12%**	13%	**14%**	**15%**
Target RAROC	8.9%	9.3%	9.8%	10.7%

Compensation paid to the Managing Partners and Supervisory Board

(by the Company and its subsidiaries)

Managing Partners

- Under the terms of the Company's bylaws, as General Partners of the Company, the three Managing Partners receive a certain proportion of the Company's net income. The total amount paid to them in 2001 out of 2000 net income was €5,998,487.33
- The Managing Partners do not receive any compensation or benefits.

Supervisory Board

In 2001, the following fees were paid to the members of the Supervisory Board for 2000:

Mrs. Eric Bourdais de Charbonnière (Chairman):	€17,532
François Grappotte:	€13,720
Pierre Michelin:	€13,720
Grégoire Puiseux :	€13,720
	and €43,648 paid by subsidiaries
Edouard de Royère:	€13,720
Daniel Michelin *(1):*	€10,671
	and €36,028 paid by a subsidiary

(1) Chairman and member of the Supervisory Board up to May 26, 2000.

FINANCIAL REPORT 2001

Consolidated Financial Statements

Consolidated Balance Sheet

At december 31, 2001

Assets

In thousands of euros

	2001	2000
Issued, uncalled capital	-	-
Fixed assets		
Goodwill	319,408	282,718
Intangible assets	114,739	122,608
Property, plant and equipment	6,409,851	5,942,514
Investments	415,561	451,327
Investments at equity	77,576	80,939
	7,337,135	**6,880,106**
Current assets		
Inventories	3,302,052	3,564,377
Trade receivables	3,389,533	3,340,431
Other receivables, prepaid expenses and accrued income	2,414,141	2,427,013
Cash equivalents	176,389	184,036
Cash	762,625	746,441
	10,044,740	**10,262,298**
Total assets	**17,381,875**	**17,142,404**

Liabilities and shareholders'equity

In thousands of euros

	2001	2000
Shareholders' equity		
Common stock ^	269,432	269,432
Paid-in capital in excess of par W	1,609,476	1,609,476
Retained earnings <2>	2,117,475	1,964,702
	3,996,383	**3,843,610**
Minority interests	**329,540**	**310,919**
Shareholders' equity including minority interests	**4,325,923**	**4,154,529**
Provisions for contingencies and charges	3,958,649	**3,710,955**
Liabilities		
Subordinated debt	1,026,598	–
Long and short-term debt	4,793,869	5,856,472
Trade payables	1,451,246	1,589,933
Other payables, deferred income and accrued expenses	1,825,590	1,830,515
	9,097,303	**9,276,920**
Total liabilities and shareholders' equity	**17,381,875**	**17,142,404**

(1) Parent company

(2) Including net income for the year *295,967* *399,045*

Consolidated Statement of Income

year ended december 31, 2001

In thousands of euros

	2001	2000
Operating revenue		
Net sales	15,774,608	15,395,573
Reversals of allowances	21,216	22,046
Other operating revenues	491,670	392,788
	16,287,494	**15,810,407**
Operating expenses		
Purchases used in production	5,585,622	5,212,204
Payroll costs	5,241,525	5,136,598
Other operating expenses	3,232,384	3,095,234
Taxes other than on income	232,054	225,730
Depreciation and amortization	937,961	955,304
Charges to allowances and provisions	17,777	22,877
	(15,247,323)	**(14,647,947)**
Operating income	**1,040.171**	**1,162,460**
Net interest expense	**(320,779)**	**(314,388)**
Operating income from ordinary activities	**719,392**	**848,072**
Net non-recurring expense	**(28,906)**	**(75,844)**
Income taxes	(329,712)	(290,447)
Net income of fully-consolidated companies	**360,774**	**481,781**
Income (losses) from companies accounted for by the equity method	(12,834)	(1,225)
Amortization of goodwill	(33,996)	(42,193)
Net income before minority interests	**313,944**	**438,363**
Minority interests	17,977	39,318
Net income	**295,967**	**399,045**
Basic earnings per share	2.20	2.96
Diluted earnings per share	2.20	2.96

Consolidated Statement of cash flows

In thousands of euros

	2001	2000
Cash flows from operating activities		
Net income before minority interests	313,944	438,363
Adjustments to reconcile net income before minority interests to net cash provided by operating activities:		
Depreciation	976,877	1,055,060
Allowances, provisions and deferred taxes	326,398	(51,543)
Net gains on disposals of assets	(290,702)	(14,142)
Other	(3,911)	(12,030)
Cash flow	1,322,606	1,415,708
Change in inventories	281,063	(248,996)
Change in receivables	(3,795)	(246,701)
Change in payables	(218,294)	185,038
Other changes in working capital	(119,060)	(87,560)
Net change in working capital	(60,086)	(398,219)
Net cash provided by operating activities	**1,262,520**	**1,017,489**
Cash flows from investing activities		
Additions to property, plant and equipment and intangible assets	(1,316,714)	(1,201,210)
Additions to investments	(240,270)	(242,111)
Total	(1,556,984)	(1,443,321)
Proceeds from disposals of property, plant and equipment and intangible assets	60,734	109,746
Proceeds from disposals of investments	424,499	76,312
Total	485,233	186,058
Net investment for the period	(1,071,751)	(1,257,263)
Impact of changes in Group structure	(4,268)	(3,257)
Net change in working capital	121,931	2,266
Net cash (used) by investing activities	**(954,088)**	**(1,258,254)**
Cash flows from financing activities		
Dividends paid to parent company shareholders	(104,662)	(93,109)
Other dividends paid	(78,087)	(67,019)
Total	(182,749)	(160,128)
Change in long and short-term debt	(162,619)	436,664
Net change in working capital	39,743	(4,215)
Net cash (used) provided by financing activities	**(305,625)**	**272,321**
Effect of exchange rate changes on cash and cash equivalents	5,730	18,439
Change in cash and cash equivalents	**8,537**	**49,995**
Cash and cash equivalents at beginning of period	**930,477**	**880,482**
Cash and cash equivalents at the period-end	**939,014**	**930,477**
o/w - Cash	762,625	746,441
- Cash equivalents	176,389	184,036

Notes to the consolidated financial statements

at 31 december 2001

Consolidation principles

The consolidated financial statements have been prepared in accordance with French generally accepted accounting principles, including standard CRC 99-02 published by the *Com/Ye de la Reglementation Comptable* dealing with consolidated financial statements.

Basis of consolidation

- Manufacturing, sales and finance companies, special purpose entities and other entities that are controlled by Compagnie Générale des Etablissements Michelin, directly or indirectly, are fully consolidated.
- Companies that are between 20% and 50%-owned by Compagnie Générale des Etablissements Michelin, directly or indirectly, are accounted for by the equity method.
- As allowed under Article L.233-19 the French *Code de Commerce,* certain companies are not consolidated, either because they are not material in relation to the Group as a whole or because of substantial and lasting restrictions on transfers of funds to other Group companies.

Accounting policies

1. All consolidated companies have a December 31 year-end. The consolidated financial statements are prepared from the financial statements of the individual Group companies submitted for approval at their respective Annual Shareholders' Meetings, as adjusted to comply with Group accounting policies and presentation rules.

2. The financial statements of foreign subsidiaries outside the euro zone are translated into euros as follows:

- Balance sheet items are translated at the year-end exchange rate.
- Income statement items are translated at the average rate for the year, except for subsidiaries operating in hyperinflationary economies where the year-end rate is applied. The aggregate effect of applying the year-end rate method is not material.

Differences arising from the translation of opening balance sheet items and net income at the year-end rate are recorded in shareholders' equity under "Retained earnings", with minority interests shown separately.

Summary of significant accounting policies

The consolidated financial statements for the year ended December 31, 2001 have been prepared on a going concern basis in accordance with generally accepted accounting principles.

The main accounting policies applied are as follows:

a) Goodwill

Goodwill represents the difference between the cost of shares in consolidated companies and the Group's equity in the underlying net assets after fair value adjustments to identifiable assets and liabilities.

Goodwill arising on acquisition of manufacturing companies is amortized on a straight-line basis over 20 years. At each year-end, the carrying value is reviewed for impairment and, where necessary, the amortization period is reduced.

Goodwill arising on acquisition of non-manufacturing companies is amortized in full in the year of acquisition.

Negative goodwill is written back to the income statement to reflect changes in the risk associated with the acquired companies.

b) Intangible assets

Other intangible assets consist mainly of purchased and internally-developed software, amortized over periods ranging from one to three years, and purchased goodwill representing small amounts, amortized in full in the year of acquisition. Research and development costs are not capitalized.

c) Property, plant and equipment

Property, plant and equipment are stated at purchase or production cost.

Effective from January 1, 1999, assets acquired under finance leases are recorded under assets and an obligation in the same amount is recorded under liabilities.

Depreciation is calculated on a straight-line basis over the average useful life of the assets. The main useful lives applied are as follows:

• buildings	25 years
• plant and equipment	7 to 12 years
• other assets	2 to 12 years.

If the carrying amount of property, plant and equipment exceeds their net realizable value, an impairment charge is recorded.

d) Investments

Investments in non-consolidated companies are stated at the lower of cost and market. Market value corresponds to the stock market price in the case of quoted investments and the Group's equity in the underlying net assets in all other cases.

Other investments are also stated at cost and an impairment charge is recorded where necessary.

e) Inventories

Inventories are stated at purchase or production cost, determined by the weighted average cost method.

Where necessary, finished product inventories are written down to net realizable value.

f) Trade receivables

Trade receivables are stated at nominal value, including receivables sold to special purpose entities in connection with securitizations. Allowances for doubtful accounts are determined on a case by case basis or according to the age of the receivables.

The methods used to convert foreign currency receivables into euros are described in note **k.**

g) Other receivables, prepaid expenses and accrued income

Prepaid expenses and accrued income include:

- Post-retirement commitments: the excess of the fair value of plan assets, adjusted for unrecognized actuarial gains and losses and prior service costs, over the present value of defined benefit obligations.
- Deferred taxes: deferred tax assets arising from deductible temporary differences and tax loss carryforwards, determined separately for each individual company.

The accounting treatment of post-retirement commitments and deferred taxes is described in notes I and **m** respectively.

h) Provisions for contingencies and charges

A provision is booked when the Group has a present legal or constructive obligation as a result of a past event, it is probable that an outflow of resources will be required to settle the obligation and the amount of the obligation can be reliably estimated.

The main provisions cover:

- post-retirement and other employee benefit commitments: the excess of the present value of defined benefit obligations over the fair value of the plan assets, adjusted for unrecognized actuarial gains and losses and prior service costs,
- deferred taxes: deferred taxes arising from taxable temporary differences, determined separately for each individual company,
- restructuring: the estimated cost of measures decided and announced by the Group, which are in the process of being implemented at the year-end.

The accounting treatment of post-retirement commitments and deferred taxes is described in notes I and **m** respectively.

Provisions for contingencies and charges recorded in the accounts of individual Group companies for the sole purpose of complying with local tax laws are reclassified under shareholders' equity, net of deferred taxes.

i) Financial instruments

Currencyrisks

Group policy consists of hedging exposures to currency risks using various market instruments, including forward contracts and options.

Foreign currency receivables and payables of the same type and with similar maturities are netted off and only the net exposure is hedged. This is the case of most foreign currency receivables and payables. Hedging contracts are recognized in the balance sheet at the date of inception.

Realized and unrealized profits and losses on hedging instruments are recognized in the income statement, together with hedging costs.

The net investment of Group holding companies in foreign subsidiaries is financed in the holding company's accounting currency.

Interest rate risk

Short-term interest rate risks are managed on a decentralized basis. A ceiling is set on fixed rate borrowings for terms in excess of one year, by currency.

Interest rate risk management policies are coordinated and monitored at Group level.

j) Investment grants

Investment grants are recorded in liabilities under "Other payables and accruals" and are written back to the income statement over periods not exceeding the depreciation period of the assets financed by the grants.

k) Foreign currency receivables and payables

Foreign currency receivables and payables are converted into euros at the exchange rate ruling on the transaction date. Their value is adjusted at the year-end based on the year-end exchange rate and the resulting exchange difference is recorded in the income statement.

l) Post-retirement and other employee benefit obligations

In most of the countries where Group companies operate, long-term post-retirement and other employee benefit plans consist of:

- Either defined contribution plans which are fully funded by contributions to external funds,
- defined benefit plans which are funded:
  - by contributions to pension funds managed by employees of the companies concerned or by external managers; in both cases, the companies concerned are generally required to make good any under-funding and are also responsible for ensuring that the pension fund is properly managed; or
  - directly by the Group companies concerned.

In accordance with Group accounting policies, commitments under defined benefit plans are determined each year by independent actuaries, using the projected unit credit method.

For each plan, the difference between the present value of the defined benefit obligation and the fair value of the plan assets, adjusted for unrecognized actuarial gains and losses and prior service costs, is recorded under either assets or liabilities.

The periodic pension cost determined on an actuarial basis as explained above is recorded in the income statement.

m) Income taxes

The income tax charge includes both current and deferred taxes. Deferred taxes are calculated by the liability method, on a company-by-company basis, on:

- temporary differences between the book value of assets and liabilities and their tax basis,
- tax loss carryforwards, to the extent that their future utilization is considered probable,

Deferred tax assets and liabilities are not discounted.

n) Research and development costs

Research and development costs are expensed in the year in which they are incurred.

o) Non-recurring income and expenses

Non-recurring items correspond to income and expenses not arising in connection with the Group's ordinary activities, including restructuring costs and gains and losses on disposals of fixed assets.

p) Earnings per share

Basic earnings per share are calculated by dividing net income by the weighted average number of shares outstanding during the year, including Compagnie Générale des Etablissements Michelin shares carried on the assets side of the balance sheet under "Short-term investments", less any shares canceled during the year.

Diluted earnings per share are calculated by adjusting net income and the weighted average number of shares for the effects of dilutive potential shares.

q) List of consolidated companies

	Registered office	Country	% Interest
1. Parent company			
• Compagnie Générale des Etablissements Michelin	Clermont-Ferrand	France	
2. Fully-consolidated companies			
Manufacturing companies	***Registered office***	***Country***	***% interest***
• Manufacture Frangaise des Pneumatiques Michelin	Clermont-Ferrand	France	96.07
• Michelin Roues France	Clermont-Ferrand	France	96.07
• Pneu Laurent	Avallon	France	96.07
• Pneumatiques Kléber	Toul	France	96.07
• SIMOREP et Cie Societé du Caoutchouc Synthétique Michelin	Bassens	France	96.07
• Kleber Reifen GmbH	Saint-Ingbert	Germany	93.48
• Michelin Reifenwerke KGaA	Karlsruhe	Germany	93.45
• Michelin Kronprinz Werke GmbH	Solingen	Germany	93.45
• Sociedade Michelin de Participagões, Indústrie e Comércio Ltda.	Rio de Janeiro	Brazil	93.45
• Michelin North America (Canada) Inc.	Laval	Canada	93.45
• Michelin Shenyang Light Truck & Passenger Tire Co., Ltd.	Liaoning Province	China	79.43
• Michelin Shenyang Rubber Components Co., Ltd.	Liaoning Province	China	79.43
• Michelin Shenyang Tire Co., Ltd.	Liaoning Province	China	79.43
• Michelin Shenyang Truck Tire Co., Ltd.	Liaoning Province	China	79.43
• Shanghai Michelin Warrior Tire Co., Ltd.	Shanghai'	China	65.42
• Industrie Colombiana de Llantas S.A.	**Call**	Colombia	93.31
• Michelin Ruedas Espafia, S.L.	Tres Cantos	Spain	90.12
• Neumáticos Michelin, S.A.	Tres Cantos	Spain	90.12
• Michelin North America, Inc.	New York	United States	93.45
• Michelin Aircraft Tire Corporation	Wilmington	United States	93.45
•American Synthetic Rubber Company, LLC	Wilmington	United States	93.45
•Taurus Rubber Company Ltd.	Budapest	Hungary	93.42
•Taurus Agricultural Tyre Ltd.	Nyiregyháza	Hungary	93.45
•Società per Azioni Michelin Italiana	Turin	Italy	93.45
• Michelin Okamoto Tire Corporation	Ohta-City, Gunma-Ken	Japan	93.45
•Industries Michelin, S.A. de C.V.	Mexico	Mexico	93.45
• Michelin (Nigeria) Limited	Nigeria	Nigeria	74.76
• Stomil-Olsztyn S.A.	Olsztyn	Poland	61.47
•Silvania S.A.	Zalau	Romania	92.11
•Victoria S.A.	Floresti	Romania	88.31
• Michelin Tyre Public Limited Company	England	United Kingdom	93.45
• Michelin Siam Co., Ltd.	Chonburi	Thailand	56.07
• Siam Tyre Industry Co., Ltd.	Saraburi Province	Thailand	56.07
• Siam Tyre Phrapradaeng Co., Ltd.	Samutprakarn	Thailand	56.07
• Siam Steel Cord Co., Ltd.	Rayong Province	Thailand	56.07

	Registered office	Country	% interest
Sales companies			
• Euromaster France	Grenoble	France	80.66
•Société d'Exportation Michelin	Clermont-Ferrand	France	100.00
•Transityre France	Clermont-Ferrand	France	93.46
• Michelin Tyre Company South Africa (Proprietary) Limited	Johannesburg	South Africa	93.45
• Michelin Argentina Sociedad Anbnima, Industrial, Comercial y Financiera	Buenos Aires	Argentina	93.45
• Michelin Reifenverkaufsgesellschaft m.b.H.	Vienna	Austria	93.44
• Michelin Australia Pty. Ltd.	Melbourne	Australia	93.45
• Michelin Belux S.A.	Brussels	Belgium	93.45
• Michelin Chile Ltda.	Santiago	Chili	93.45
• Michelin Korea Co., Ltd.	Seoul	South Korea	93.45
• Michelin Gummi Compagni A/S	Br0ndby	Danmark	93.45
• Michelin Rehvide AS	Tallinn	Estonia	93.45
• Michelin Retread Technologies, Inc.	Wilmington	United States	93.45
• Tire Centers, LLC	Wilmington	United States	93.45
• Oy Suomen Michelin Ab	Espoo	Finland	93.45
• Elastika Michelin A.E.	Halandri	Greece	93.45
• Michelin Asia (Hong-Kong) Ltd.	Hong-Kong	Hong-Kong	93.45
• Michelin Magyarország Kft.	Budapest	Hungary	93.45
• Michelin India Private Limited	New Delhi	India	93.45
• Michelin Tire Sales Co., Ltd.	Tokyo	Japan	93.45
• Nihon Michelin Tire Co., Ltd.	Tokyo	Japan	93.45
• Michelin Riepas SIA	Riga	Latvia	93.45
• UAB Michelin Padangos	Vilnius	Lithuania	93.45
• Michelin Tyre Services Company Ltd.	Nigeria	Nigeria	56.34
• Norsk Michelin Gummi A/S	Skedsmo	Norway	93.45
• M. Michelin & Company Limited	Wellington	New-Zealand	93.45
•Transityre B.V.	Breda	Netherland	93.45
• Eurodrive Services and Distribution N.V.	Amsterdam	Netherland	93.01
• Michelin Nederland N.V.	Drunen	Netherland	93.45
• Michelin del Perú S.A.	Lima	Peru	93.45
• Michelin Polska Sp. z o.o.	Warsaw	Poland	93.45
• Michelin Companhia Luso-Pneu, Ltda.	Loures	Portugal	93.45
• Michelin Ceská republika s.r.o.	Prague	Czech Republic	93.45
• Michelin Romania Distribution S.R.L.	Bucharest	Romania	93.45
• Associated Tyre Specialists Limited	England	United Kingdom	93.15
• Michelin Tyres Russian General Agency ZAO	Moscow	Russia	93.45
•Société commerciale Michelin Sénégal (SCMS)	Dakar	Senegal	100.00
• Michelin Asia (Singapore) Co. Pte. Ltd.	Singapore	Singapore	93.45
• Michelin Slovensko, s.r.o.	Bratislava	Slovak Republic	93.45
• Michelin Slovenija, pnevmatike, d.o.o.	Ljubljana	Slovenia	93.45
• Michelin Gummiringar AB	Stockholm	Sweden	93.45
• Sociéte Anonyme des Pneumatiques Michelin	Givisiez	Switzerland	93.45
•Michelin Chun Shin Ltd.	Taipei	Taiwan	91.56
• Michelin Siam Marketing & Sales Co., Ltd.	Bangkok	Thailand	56.07
• Michelin Lastikleri Ticaret A.S.	Istanbul	Turkey	93.45
• Miscellaneous distribution companies in Europe and other geographic regions			

	Registered office	Country	% Interest
Finance Companies and Other			
• Participation et Développement Industriels	Clermont-Ferrand	France	99.99
•Spika S.A.	Clermont-Ferrand	France	100.00
•Société Civile Immobilière Michelin	Clermont-Ferrand	France	96.07
•Société Civile Immobilière Michelin Breteuil	Paris	France	96.07
• Société des Precédés Industriels Modernes	Clermont-Ferrand	France	96.07
•Société de Technologie Michelin	Clermont-Ferrand	France	100.00
• ViaMichelin	Boulogne-Billancourt	France	99.99
• Michelin Investment Holding Company Limited	Bermuda	Bermuda	93.45
• Plantações E. Michelin Ltda.	Rio de Janeiro	Brazil	93.45
• Plantações Michelin da Bahia Ltda.	Rio de Janeiro	Brazil	93.45
• Michelin Tire Research and Development Center (Shanghai) Co., Ltd.	Shanghai'	China	93.45
• Michelin (China) Investment Co., Ltd.	Shanghai	China	93.45
•CR Funding Corporation	Wilmington	United States	93.45
• Michelin Americas Research & Development Corporation	Wilmington	United State	93.45
• Michelin Corporation	New York	United States	93.45
• Michelin Finance Luxembourg S.A.	Luxembourg	Luxembourg	95.42
• Osse River Rubber Estates Limited	Nigeria	Nigeria	65.23
• Utagba Uno Rubber Estates Limited	Nigeria	Nigeria	65.23
•Araromi Rubber Estates Limited	Nigeria	Nigeria	52.70
•Waterside Rubber Estates Limited	Nigeria	Nigeria	74.76
• MC Projects B.V.	Amsterdam	Netherlands	46.73
• Michelin Finance (Pays-Bas) B.V.	Amsterdam	Netherlands	93.45
• Michelin Holding (Pays-Bas) B.V.	Amsterdam	Netherlands	93.45
• Michelin Participations B.V. i.l.	Amsterdam	Netherlands	92.62
• Société des Matières Premières Tropicales Pte. Ltd.	Singapore	Singapore	93.45
•Compagnie Financière Michelin	Granges-Paccot	Switzerland	93.45
• Michelin Factoring S.A.	Granges-Paccot	Switzerland	93.45
• Michelin Participations S.A.	Granges-Paccot	Switzerland	92.62
• Michelin Recherche et Technique S.A.	Granges-Paccot	Switzerland	93.45
• M.S. Enterprises Holding Co., Ltd.	Bangkok	Thailand	47.66
• Michelin Siam Group Co., Ltd.	Bangkok	Thailand	56.07
3. Companies accounted for by the equity method			
• Compagnie Générale des Transports Verney	Le Mans	France	41.30
• RubberNetwork.com, LLC	Wilmington	United State	25.93
• Sucat Land Corp.	Makati City	Philippines	27.33
•Tekersan Jant Sanayi A.S.	Istanbul	Turquie	18.78
• Woco Michelin AVS B.V.	Amsterdam	Netherlands	45.79

4. Non-consolidated companies

Various companies that are not material in relation to the Group as a whole have not been consolidated, as allowed under Article L.233-19 of the French *Code de Commerce* (consolidated financial statements).

The above list of the main consolidated companies and companies accounted for by the equity method, complies with the requirements of Article 248-12 of decree no. 67-236 of March 23, 1967 concerning the consolidated financial statements of trading companies.

Notes to the consolidated balance sheet

The consolidated financial statements have been prepared in accordance with French generally accepted accounting principles, including standard CRC 99-02 published by the *Comité de la Règlementation* Comptable dealing with consolidated financial statements.

1. Goodwill

Goodwill can be analyzed as follows:

In thousands of euros

	Cost	Depreciation and allowances	Net book value
Goodwill at January 1, 2000	499,565	(251,931)	247,634
Increases	59,503	(42,046)	17,457
Decreases	(65,066)	65,066	–
Translation adjustments and other	37,667	(20,040)	17,627
Goodwill at December 31, 2001	**531,669**	**(248,951)**	**282,718**
Increases	59,166	(34,487)	24,679
Decreases	(24,452)	24,452	–
Translation adjustments and other	23,944	(11,933)	12,011
Goodwill at December 31, 2001	**590,327**	**(270,919)**	**319,408**

The increase in goodwill at December 31, 2001 primarily corresponds to goodwill arising on acquisition of the Tofan Group (Romania).

2. Intangible assets

Intangible assets can be analyzed as follows:

In thousands of euros

	Cost	Depreciation and allowances	Net book value
Intangible assets at January 1, 2000	359,480	(225,675)	133,805
Increases	48,824	(64,296)	(15,472)
Decreases	(11,436)	16,738	5,302
Translation adjustments and other	(1,194)	167	(1,027)
Intangible assets at December 31, 2001	**395,674**	**(273,066)**	**122,608**
Increases	55,628	(72,674)	(17,046)
Decreases	(10,296)	16,143	5,847
Translation adjustments and other	9,928	(6,598)	3,330
Intangible assets at December 31, 2001	**450,934**	**(336,195)**	**114,739**

The main movements in 2001 concern software.

The break down by category is as follows:

In thousands of euros

	Cost	Depreciation and allowances	Net book value
Software	367,589	(261,381)	106,208
Other intangible assets	83,345	(74,814)	8,531
Total	**450,934**	**(336,195)**	**114,739**

3. Property, plant and equipment

Property, plant and equipment can be analyzed as follows:

In thousands of euros

	Cost	Depreciation and allowances	Net book value
Property, plant and equipment at January 1, 2000	13,969,155	(8,265,941)	5,703,214
Increases	1,149,543	(940,283)	209,260
Decreases	(587,430)	499,590	(87,840)
Translation adjustments and other	266,491	(148,611)	117,880
Property, plant and equipment at December 31, 2001	**14,797,759**	**(8,855,245)**	**5,942,514**
Increases	1,261,086	(890,929)	370,157
Decreases	(443,865)	412,662	(31,203)
Translation adjustments and other	230,140	(101,757)	128,383
Property, plant and equipment at December 31, 2001[(1)]	**15,845,120**	**(9,435,269)**	**6,409,851**

Capital expenditure for the year ended December 31, 2001 amounted to €1,261,086 thousand.

The break down by category is as follows:

In thousands of euros

	Cost	Depreciation et provisions	Net book value
Land and buildings	3,653,105	(1,722,675)	1,930,430
Plant and equipment	9,873,085	(6,076,269)	3,796,816
Other	2,318,930	(1,636,325)	682,605
Total	**15,845,120**	**(9,435,269)**	**6,409.851**

In thousands of euros

	Cost	Depreciation and allowances	Net book value
0) including assets acquired under finance leases at December 31, 2001	*434,882*	*(217,515)*	277,367

6. Inventories

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Raw materials, semi-finished products and other supplies	986,784	1,147,769
Finished products	2,437,482	2,516,692
Allowances	(122,214)	(100,084)
Net book value	**3,302,052**	**3,564,377**

7. Trade receivables

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Trade receivables	3,498,703	3,441,407
Allowances	(109,170)	(100,976)
Net book value	**3,389,533**	**3,340,431**

Substantially all trade receivables are due within one year.

8. Other receivables, prepaid expenses and accrued income

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Other receivables, net [m]	483,701	521,015
Excess of pension plan assets over the related benefit obligations (note l)	453,493	498,884
Deferred tax assets (note m)	1,391,333	1,352,494
Other accruals	85,614	54,620
Total	**2,414,141**	**2,427,013**
(1) including amounts due beyond one year	*13,851*	*14,090*

9. Cash equivalents

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Compagnie Générale des Etablissements Michelin shares	164,272	157,469
Less: allowances for impairment in value	(10, 868)	(8,910)
Other listed investments, net	1,003	1,175
Other cash equivalents, net	21,982	34,302
Total	**176,389**	**184,036**

-As of December 31, 2001, Compagnie Générale des Etablissements Michelin held 4,140,457 of its own shares with a market value of €153,404 thousand. During 2001, the number of own shares held by the Company increased by 286,782.

-As of December 31, 2001, the market value of other listed investments was €2,158 thousand.

6. Inventories

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Raw materials, semi-finished products and other supplies	986,784	1,147,769
Finished products	2,437,482	2,516,692
Allowances	(122,214)	(100,084)
Net book value	**3,302,052**	**3,564,377**

7. Trade receivables

In thousands of euros

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-As of December 31, 2001, the market value of other listed investments was €2,158 thousand.

10. Changes in shareholders' equity and minority interests

In thousands of euros

	Common stock	Paid-in capital in excess of par	Retained earnings	Translation adjustment	Net income	Shareholders' equity	Minority interest	Total
At December 31, 1999 [pro forma)	**269,432**	**1,609,476**	**2,005,280**	**(632,867)**	**282,522**	**3,533,843**	**304,391**	**3,838,234**
Dividends paid					(138,561)	(138,561)	(21,567)	(160,128)
Appropriation of undistributed ncome			143,961		(143,961)	-	-	-
Met income :or the year					399,045	399,045	39,318	438,363
Translation adjustment and other			10,616	38,667		49,283	(11,223)	38,060
At December 31, 2000	**269,432**	**1,609,476**	**2,159,857**	**(594,200)**	**399,045**	**3,843,610**	**310,919**	**4,154,529**
Dividends paid					(157,674)	(157,674)	(25,075)	(182,749)
Appropriation of undistributed income			251,581	(10,210)	(241,371)	-	-	-
Net income for the year					295,967	295,967	17,977	313,944
Translation adjustment and other			4,389	10,091		14,480	25,719	40,199
At December 31, 2001	**269,432**	**1,609,476**	**2,415,827**	**(594,319)**	**295,967**	**3,996,383**	**329,540**	**4,325,923**

11. Provisions for contingencies and charges

In thousands of euros

	Dec. 31, 2000	Translation adjustment	Movements	Dec. 31, 2001
Post-retirement and other employee benefit obligations	3,038,342	73,942	(21,127)	3,091,157
Deferred taxes	62,990	617	(6,373)	57,234
Restructuring	431,421	1,895	194,149	627,465
Other	178,202	1,174	3,417	182,793
Total	**3,710,955**	**77,628**	**170,066**	**3,958,649**

Movements in provisions for contingencies and charges are recorded in the income statement.

The net increase in restructuring provisions corresponds to:

- new provisions for contingencies recorded during the year, including provisions for the new cost reduction plan in North America and additional provisions for costs related to the ongoing plan to improve the competitiveness of the Group's operations in Europe
- provisions reversed to cover expenses incurred during the year in connection with the implementation of restructuring plans (including the plan to improve the competitiveness of Group operations in Europe).

12. Income taxes

Income taxes reported in the income statement can be analyzed as follows:

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Current taxes	318,375	309,359
Deferred taxes	11,337	(18,912)
Total	**329,712**	**290,447**

The following table presents a reconciliation of the theoretical tax charge to the actual tax charge:

	Dec. 31, 2001	Dec. 31, 2000
Tax on the contribution of Group companies to consolidated income, at standard local tax rates	191,393	285,178
Effect of permanent differences	1,639	(27,972)
Effect of unrecognized deferred taxes	136,864	34,314
Effect of changes in future tax rates	12,252	7,900
Other effects	(12,436)	(8,973)
Income taxes reported in the income statement	**329,712**	**290,447**

	Dec. 31, 2001	Dec. 31, 2000
Total unrecognized deferred tax assets	**528,340**	**473,533**

Deferred tax assets and liabilities break down as follows by category:

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Deferred tax assets	1,391,333	1,352,494
Deferred tax liabilities	(57,234)	(62,990)
Net obligation	**1,334,099**	**1,289,504**
Breakdown:		
- temporary differences	1,035,321	966,090
- tax loss carryforwards	335,458	344,663
- tax credits	(36,680)	(21,249)

13. Post-retirement and other employee benefit obligations under defined benefit plans

Assets and liabilities break down by category is as follows:

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Excess of pension plan assets over defined benefit obligations	453,493	498,884
Unfunded post-retirement and other employee benefit obligations	(3,091,157)	(3,038,342)
Net obligation	**(2,637,664)**	**(2,539,458)**
Breakdown:		
- Long-term pre-retirement benefits	(106,172)	(116,409)
- Post-retirement benefits:		
- retirement benefits	(210,702)	(138,727)
- other employee benefits	(2,320,790)	(2,284,322)

	Dec. 31, 2001	Dec. 31, 2000
Net periodic pension cost recorded in the income statement:		
Service cost	197,870	203,879
Interest cost	521,376	465,923
Forecast yield on plan assets	(369,706)	(364,014)
Recognized actuarial gains and losses	75	-
Prior service cost	10,817	17,718
Curtailments and settlements	(3,276)	(414)
Total	**357,156**	**323,920**

14. Subordinated debt and other long and short-term debt

In thousands of euros

	At Dec. 31, 2001	Due within one year	Due in 1 to 5 years	Due in more than five years	At Dec. 31, 2000
Subordinated debt	1,026,598	–	–	1,026,598	–
Other long and short-term debt					
- Convertible bonds	10	10	–	–	10
- Other bonds	322,717	17,819	304,898	–	322,717
- Other long and short-term debt	4,471,142	2,763,790	1,361,062	346,290	5,533,745
Subtotal, other long and short-term debt	**4,793,869**	**2,781,619**	**1,665,960**	**346,290**	**5,856,472**
Total	**5,820,467**	**2,781,619**	**1,665,960**	**1,372,888**	**5,856,472**
Debt secured by collateral at December 31, 2001				65,748	
Obligations under finance leases at December 31, 2001				330,771	

Subordinated debt

In September 2000, Compagnie Financière Michelin obtained a USD 1,075 million line of credit from a pool of banks and insurance companies.

Drawdowns may be made on the line of credit up until September 2005 and will be subordinate in ranking to all other liabilities of the Group for repayment purposes. All drawdowns must be repaid in full by September 2012.

The USD 905 million facility provided by the banks was drawn down in October 2001.

The USD 170 million contingent facility provided by the insurance companies has the same characteristics as the bank tranche, but drawdowns may be made only following the occurrence of certain events based on changes in average European and American GDP. No drawdowns have been made on the contingent facility.

Net debt at December 31, 2001 breaks do.wn as follows (in thousands of euros):

- Subordinated debt	1,026,598
- Long and short-term debt	4,793,869
Sous-total	**5,820,467**
- Cash equivalents and other short-term investments	(176,389)
- Cash	(762,625)
Total	**4,881,453**

Long and short-term debt breaks down as follows between fixed and floating rate debt and by currency, after taking into account hedging instruments:

In thousands of euros

Currency	Floating rate	Fixed rate	Average life of fixed rate debt	Total long and short-term debt	% by currency
Euros and euro-zone currencies	(541,565)	326,308	4.3	(215,257)	(4.4)
Swiss francs	986,177	74,327	2.4	1,060,504	21.7
Pounds sterling	471,223	130	2.0	471,353	9.7
Other non-euro-zone currencies	259,890	418	2.3	260,308	5.3
Total European currencies	**1,175,725**	**401,183**	**3.9**	**1,576,908**	**32.3**
U.S. dollars	1,466,000	1,106,006	5.0	2,572,006	52.7
Canadian dollars	92,401	1,066	1.8	93,467	1.9
Total dollar zone	**1,558,401**	**1,107,072**	**5.0**	**2,665,473**	**54.6**
Other currencies	569,713	69,359	1.9	639,072	13.1
Total	**3,303,839**	**1,577,614**	**4.6**	**4,881,453**	**100.0**

Hedging costs are charged directly to the income statement.

15. Off-balance sheet commitments

In thousands of euros

	Dec. 31, 2001	Dec. 31, 2000
Commitments given:		
Guarantees given	114,651	93,100
Future minimum lease payments under non-cancelable operating leases	586,346	618,298
Discounted bills	6,471	7,037
Total	**707,468**	**718,435**
Commitments received:		
Guarantees received	254,378	309,716

Notes to the consolidated statement of income

The consolidated financial statements have been prepared in accordance with French generally accepted accounting principles, including standard CRC 99-02 published by the *Comité de la Réglementation* Comptable dealing with consolidated financial statements.

16. Payroll costs and number of employees

In thousands of euros

	2001	2000
Payroll costs	5,241,525	5,136,598
Average number of employees of fully-consolidated companies	127,467	128,122

17. Research and development costs (ṁ thousands of euros)

Research and development costs for the last two years were as follows:
-2001: 701,902
-2000:645,307

18. Impairment charges

In thousands of euros

	2001	2000
Net charges for impairment of:		
- inventories	18,426	(5,169)
- receivables	9,030	11,971

Impairment charges related to inventories are included in "Purchases used in production" and charges related to receivables are included in "Other operating expenses" in the consolidated statement of income.

19. Interest income and expense

In thousands of euros

	2001	2000
Interest income and expense	(278,462)	(315,782)
Exchange gains and losses	(31,043)	(2,298)
Amortization and net movements in allowances for impairment of financial assets	(11,274)	3,692
Total	**(320,779)**	**(314,388)**

Net exchange losses for 2001 result mainly from the fall in value of South American currencies.

20. Non-recurring income and expense

In thousands of euros

	2001	2000
Restructuring costs	(339,959) W	(67,349)
Net gains on disposals of fixed assets	363,130 ®	14,142
Other non-recurring items	(52,077)	(22,637)
Total	**(28,906)**	**(75,844)**

0) Restructuring costs break down as follows by geographic area:

-Europe	*(188,142)*
- North America	*(122,960)*
- Other	*(28,857)*

(2) Net gains on disposals of fixed assets include a €375,373 thousand gain on disposal of Peugeot S.A. shares.

21. Segment information

In thousands of euros

Business segments	Passenger cars and light trucks	Heavy trucks	Other businesses	Inter-segment eliminations	Total
			2000		
Net property, plant and equipment	2,751,813	1,283,906	1,906,795*W*		5,942,514
Sales	7,686,396	4,092,712	4,807,026	(1,190,561)	15,395,573
Operating income	584,214	557,965	20,281		1,162,460
			2001		
Net property, plant and equipment	2,977,194	1,341,047	2,091,610 ^		6,409,851
Sales	7,982,179	3,915,259	4,901,194	(1,024,024)	15,774,608
Operating income	711,110	342,976	(13,915)		1,040,171

(1) Including shared assets:
-2001: 921,511
-2000: 793,184

Geographical areas	Europe	North America and Mexico	Other	Total
		2000		
Net property, plant and equipment	2,940,748	2,292,643	709,123	5,942,514
Sales	7,309,519	5,959,576	2,126,478	15,395,573
		2001		
Net property, plant and equipment	3,139,481	2,433,619	836,750	6,409,851
Sales	7,446,968	6,286,471	2,041,169	15,774,608

22. Subsequent events

Impact of the devaluation of the Argentine peso:

The balance sheet and income statement of Michelin Argentina Sociedad Anónima have been translated based on an exchange rate of ARS 1.65 = USD 1. The impact on the 2001 financial statements was a charge of €12,512 thousand.

23. Management compensation

Compagnie Générale des Etablissements Michelin is administered by Managing Partners *("Gérants")* who are also general partners *("assodés commanditès")* of the Company. As such, they are entitled to a share of the income distributed among all the general partners in accordance with the provisions of the Company's bylaws. The Managing Partners do not receive any compensation or other benefits from Compagnie Générale des Etablissements Michelin or any of its subsidiaries or affiliates.

FINANCIAL REPORT 2001

Financial Statements

for the year ended December 31, 2001, in eu

Balance Sheet

at december 31, 2001

Assets

In euros

	2001			2000
	Cost	Depreciation amortization, provisions	Net	Net
FIXED ASSETS				
Intangible assets				
Patents, licenses and other rights	8,659,626.28	8,659,626.28	–	–
Other intangible assets	61,296.21	45,892.00	15,404.21	16,687.89
Prepayments	–	–	–	–
	8,720,922.49	**8,705,518.28**	**15,404.21**	**16,687.89**
Property and equipment				
Land	102,469.01	–	102,469.01	102,469.01
Buildings	1,809,422.59	1,677,822.51	131,600.08	159,005.70
Other	389,994.64	370,680.22	19,314.42	39,909.25
Assets under construction	–	–	–	–
Prepayments	–	–	–	–
	2,301,886.24	**2,048,502.73**	**253,383.51**	**301,383.96**
Investments *(1)*				
Shares in subsidiaries and affiliates	2,610,410,623.44	364,150,437.72	2,246,260,185.72	2,245,798,435.87
Loans and advances to subsidiaries and affiliates	1,338,432,448.64	–	1,338,432,448.64	1,334,791,620.25
Other equity interests	3,788,198.35	–	3,788,198.35	3,788,198.35
Loans	78,176.69	–	78,176.69	78,176.69
Other investments	681.45	–	681.45	681.45
	3,952,710,128.57	**364,150,437.72**	**3,588,559,690.85**	**3,584,457,112.61**
(1)	**3,963,732,937.30**	**374,904,458.73**	**3,588,828,478.57**	**3,584,775,184.46**
CURRENT ASSETS				
Accounts receivable	475,581,859.38	–	475,581,859.38	184,401,762.76
Cash equivalents				
Own shares	164,271,711.36	10,867,779.51	153,403,931.85	148,559,171.25
Other marketable securities	656.08	15.78	640.30	640.30
	164,272,367.44	**10,867,795.29**	**153,404,572.15**	**148,559,811.55**
Cash	144,961.95	-	144,961.95	119,705.26
ACCRUALS				
Prepaid expenses *(2)*	8,579.87	-	8,579.87	39,050.67
(ID	**640,007,768.64**	**10,867,795.29**	**629,139,973.35**	**333,120,330.24**
Deferred charges **(III)**	1,224,692.30	–	1,224,692.30	1,520,949.68
Bond call premiums (IV)	–	-	–	–
Conversion losses (V)	–	–	–	–
TOTAL ASSETS (1 + II + III + IV + V)	**4,604,965,398.24**	**385,772,254.02**	**4,219,193,144.22**	3,919,416,464.38
(1) o/w due in less than one year			*880,096,430.48*	*748,076,390.37*
(2) o/w due in more than one year			–	–

Liabilities and shareholders' equity

In euros

	2001	2000
SHAREHOLDERS' EQUITY		
Common stock	269,431,746.00	269,431,746.00
Paid-in capital in excess of par	1,609,475,573.81	1,609,475,573.81
Revaluation reserve	530,990,252.63	530,528,502.63
Other reserves	802,517,019.16	675,397,057.12
Retained earnings	45,587,019.80	39,502,098.36
Net income	452,871,105.91	263,620,238.61
Untaxed reserves	61,597,677.21	61,597,677.21
(0	**3,772,470,394.52**	**3,449,552,893.74**
PROVISIONS FOR CONTINGENCIES AND CHARGES		
Provisions for contingencies	—	–
Provisions for charges	–	-
(II)	-	-
LIABILITIES *(1)*		
Convertible bonds	10,119.94	10,119.94
Other bonds	322,612,452.32	322,612,559.03
Bank borrowings *(2)*	–	–
Other long and short-term debt *(2)*	32,416,561.26	34,800,101.83
Accrued taxes and payroll costs	7,043,658.52	48,033,811.77
Due to suppliers of fixed assets	–	10,210.28
Other liabilities	84,637,545.60	64,393,551.71
	446,720,337.64	469,860,354.56
ACCRUALS		
Deferred income *(1)*	2,412.06	3,216.08
(III)	**446,722,749.70**	**469,863,570.64**
Conversion gains (IV)	–	–
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY (1 + II + III + IV)	**4,219,193,144.22**	**3,919,416,464.38**
(1) o/w due in more than one year	*304,900,446.06*	*304,900,446.06*
o/w due in less than one year	*747,822,303.64*	*764,963,724.58*
(2) o/w short-term bank loans and overdrafts	–	–

Statement of income

for the year ended december 31, 2001

In euros

		2001	2000
Operating revenue *(1)*			
Royalties (including Export revenues: 308,990,761.44)		364,240,518.88	335,562,960.73
Other revenues		149,649.82	155,417.36
Total operating revenues	**(1)**	**364,390,168.70**	**335,718,378.09**
Operating expense *(2)*			
External charges		253,306,946.14	212,645,398.10
Taxes other than on income		1,998,531.22	1,958,799.69
Wages and salaries		1,110,087.78	1,147,039.19
Payroll taxes		435,795.99	459,331.75
Depreciation and amortization:			
• Fixed assets		1,868,860.06	1,206,367.68
• Deferred charges		-	-
Other expenses		16,105,309.39	4,518,666.56
Total operating expenses	**(II)**	**274,825,530.58**	**221,935,602.97**
OPERATING INCOME (1 -II)	**(1 -II)**	**89,564,638.12**	**113,782,775.12**
Interest and other investment income			
Dividends from subsidiaries and affiliates *(3)*		388,989,800.76	177,464,390.64
Interest income *(3)*		31,203.36	7,035,308.25
Reversals of allowances for impairment in value		9.01	1,739,082.75
Exchange gains		143,991.74	808,568.20
Net gains on sales of marketable securities		17,777.40	806,356.62
Total interest and other investment income	**(III)**	**389,182,782.27**	**187,853,706.46**
Interest and other investment expense			
Charges to allowances for impairment in value		2,253,809.40	296,257.38
Interest expense *(4)*		22,466,848.18	23,918,512.43
Exchange losses		340,022.30	235,668.38
Net losses on sales of marketable securities		703,526.58	-
Total interest and other investment expense	**(IV)**	**25,764,206.46**	**24,450,438.19**
NET INTEREST AND OTHER INVESTMENT INCOME	**(III -IV)**	**363,418,575.81**	**163,403,268.27**
INCOME FROM ORDINARY ACTIVITIES	**(1 - II + III --IV)**	**452,983,213.93**	**277,186,043.39**
Non-recurring income			
From revenue transactions		384,446.96	25,196.55
From capital transactions		9.16	505.64
Reversals of allowances		-	32,000,000.00
Total non-recurring income	**(V)**	**384,456.12**	**32,025,702.19**
Non-recurring expense			
On revenue transactions		75,298.61	19,218,035.49
On capital transactions		5,780.53	7,456.07
Charges to allowances		-	-
Total non-recurring expenses	**(VI)**	**81,079.14**	**19,225,491.56**
NET NON-RECURRING INCOME	**(V --VI)**	**303,376.98**	**12,800,210.63**
INCOME TAX	(VII)	**415,485.00**	**26,366,015.41**
TOTAL REVENUES	**(1 + III +V)**	**753,957,407.09**	**555,597,786.74**
TOTAL EXPENSES	**(II + IV + VI + VII)**	**301,086,301.18**	**291,977,548.13**
NET INCOME		**452,871,105.91**	**263,620,238.61**
(1) o/w revenues relating to prior years		–	–
(2) o/w expenses relating to prior years		-	-
(3) o/w revenues from related party transactions		*388,479,030.53*	*177,143,241.34*
(4) o/w expenses arising from related party transactions		*2,022,392.00*	*1,503,442.13*

Notes to the financial statements

The Company's total assets at December 31, 2001 amounted to €4,219,193,144.22.

Income statement totals for the year are as follows, in euros:

- Total revenues	753,957,407.09
- Total expenses	301,086,301.18
Net income for the year	**452,871,105.91**

The Company's financial year covers the 12 months from January 1 to December 31.

The following notes form an integral part of the financial statements.

Significant events of the year

Significant events of the year are discussed in the Managing Partners' report to the Annual Shareholders' Meeting to be called to approve the 2001 financial statements.

Summary of significant accounting policies

The financial statements for the year ended December 31, 2001 have been prepared in accordance with generally accepted accounting principles. There were no changes of accounting method in 2001 compared with prior years.

The main accounting policies applied by the Company are as follows:

a) Intangible assets

"Patents, licenses and other rights" correspond primarily to purchased software. Purchased software is amortized over periods ranging from 12 months to 3 years, depending on the materiality of the amounts involved.

"Other intangible assets" consist of vehicle parking rights, which are amortized over 40 years in accordance with French tax rules.

b) Property and equipment

•Cost

Property and equipment are stated at historical cost or at valuation, in the case of assets held at the time of the 1976/1978 legal revaluation.

• Depreciation

Property and equipment are depreciated by the straight-line method over the following estimated useful lives:

-Buildings: 30 years

- Equipment: 10 years, except for computer equipment which is depreciated over five years.

c) Investments

Shares in subsidiaries and affiliates

- *Cost:* Shares in subsidiaries and affiliates are stated at historical cost or at valuation, in the case of assets held at the time of the 1976/1978 legal revaluation.
- *Net book value:* shares in subsidiaries and affiliates are stated at the lower of cost and fair value. Fair value corresponds to the Company's equity in the underlying net assets, except in the following cases:
  - the fair value of shares in Manufacture Franchise des Pneumatiques Michelin is determined based on a range of valuation criteria,
  - the fair value of shares in Pardevi SA is determined by including unrealized gains on the securities held in this company's portfolio, in accordance with the applicable accounting and tax rules.

Other equity inrerest

Other equity interests correspond to shareholdings that the Company intends to retain but which are not held for purposes related directly to the Company's business.

Other equity interests are also stated at the lower of cost and fair value.

d) Accounts receivable

Accounts receivable are stated at nominal value.

e) Paid-in capital in excess of par

This item corresponds to premiums on shares issued for cash and on conversion of bonds.

f) Untaxed reserves

Substantially all amounts reported under this caption correspond to reinvested capital gains set off against write downs of securities in application of the former Article 40 of the General Tax Code, which were reclassified under "untaxed amortization" prior to the 1976/1978 legal revaluations.

g) Conversion of foreign currencies

Revenues and expenses in foreign currencies are converted at the exchange rate ruling on the transaction date or at the hedging rate.

Receivables and payables in foreign currencies are converted at the year-end exchange rate or at the hedging rate.

Contracts for the forward purchase or sale of foreign currencies that are outstanding at the balance sheet date are recorded in the balance sheet.

h) Deferred charges

Deferred charges correspond to debt issuance costs related to the 1996 bond issue. These costs are being amortized over the life of the bonds.

Fixed assets, depreciation and amortization

In euros

Intangible assets and property and equipment representing non-material amounts that are close to being fully depreciated or amortized are not included in the following tables.

FIXED ASSETS	Cost at January 1, 2001	Additions, accrued interest for the year	Disposals, decreases in accrued interest	Cost at December 31, 2001
Intangible assets	6,896,395	1,824,527	–	8,720,922
Property and equipment	2,361,398	820	60,332	2,301,886
	9,257,793	1,825,347	60,332	11,022,808
Investments				
Shares in subsidiaries and affiliates	2,610,410,633	–	9	2,610,410,624
Loans and advances to subsidiaries and affiliates	1,334,791,620	439,865,485	436,224,656	1,338,432,449
Other equity interests	3,788,198	–	–	3,788,198
Loans	78,177	–	–	78,177
Other investments	681	–	–	681
	3,949,069,309	439,865,485	436,224,665	3,952,710,129
Total	**3,958,327,102**	**441,690,832**	**436,284,997**	**3,963,732,937**

DEPRECIATION AND AMORTIZATION	At January 1, 2001	Increases	Decreases	At december 31, 2001
Intangible assets	6,879,707	1,825,811	–	8,705,518
Property and equipment	2,060,014	43,049	54,560	2,048,503
	8,939,721	1,868,860	54,560	10,754,021
Deferred charges	1,441,624	296,257	–	1,737,881
Total	**10,381,345**	**2,165,117**	**54,560**	**12,491,902**

Allowances and provisions

In euros

	At January 1, 2001	Increases	Decreases	At December 31, 2001
Untaxed reserves	61,597,677	–	–	61,597,677
Provisions for contingencies and charges:				
Provisions for contingencies	–	–	–	–
Provisions for charges	–	–	–	–
	-	-	-	-
Allowances for impairment in value *(1)*	373,522,440	1,957,552	461,759	375,018,233
Total	**435,120,117**	**1,957,552**	**461,759**	**436,615,910**
Including movements charged/credited to:				
- Operating expense/income		–	–	
- Investment and other expense/income		1,957,552	9	
- Non-recurring expense/income		–	–	
- Revaluation reserve		–	461,750	

(1) Movements in allowances for impairment in value can be analyzed as follows (in euros):

- Increases: Accounts receivable	–
Own shares	*1,957,552*
-Decreases: Other marketable securities	*461,759*

Items relating to several balance sheet items

In euros

	Transactions involving		Payables or receivables represented by trade notes
	related companies	other entities in which the Company holds an equity interest	
Shares in subsidiaries and affiliates (net book value)	2,246,260,185	1	–
Loans and advances to subsidiaries and affiliates	1,338,432,449	–	–
Other equity interests	–	3,788,198	–
Other receivables	398,590,043	–	–
Other long and short-term debt	32,416,561	–	–
Other liabilities	83,606,483	–	–

Maturities of loans and receivables, payables and long and short-term debt

In euros

LOANS AND RECEIVABLES	Total	Due within one year	Due in more than one year
Fixed assets			
Loans and advances to subsidiaries and affiliates	1,338,432,449	880,018,254	458,414,195
Loans	78,177	78,177	–
Other investments	681	–	681
Current assets			
Other receivables	475,581,859	437,688,106	37,893,753
Total	**1,814,093,166**	**1,317,784,537**	**496,308,629**

PAYABLES AND LONG AND SHORT-TERM DEBT	Total	Due within one year	Due in one to five years	Due in more than five years
Convertible bonds	10,120	10,120	–	–
Other bonds	322,612,452	17,714,418	304,898,034 *(1)*	–
Bank borrowings	–	–	–	–
Other long and short-term debt	32,416,561	32,416,561	–	–
Accrued taxes and payroll costs	7,043,659	7,043,659	–	–
Due to suppliers of fixed assets	–	–	–	–
Other liabilities	84,637,546	84,637,546	–	–
Total	**446,720,338**	**141,822,304**	**304,898,034**	**–**

(1) 1996 6.7% bonds due February 79, 2006 at par.

Accrued charges

In euros

ACCRUED CHARGES INCLUDED IN THE FOLLOWING BALANCE SHEET CAPTIONS:	
Other bonds	17,704,209
Bank borrowings	–
Other long and short-term debt	288,548
Accrued taxes and payroll costs	255,868
Other liabilities	992,632
Total	**19,241,257**

Prepaid expenses and deferred income

In euros

Prepaid expenses correspond exclusively to operating expenses.

Prepaid expenses at December 31, 2001.....8,580

Revaluation reserve

In euros

Revaluation reserve at December 31, 2001

.....530,990,253

o/w 32,091 related to land

530,958,162 related to shares in subsidiaries and affiliates.

Reserves

In euros

Reserves at December 31, 2001 break down as follows:

- Legal reserve corresponding in full to long-term capital gains taxed at the reduced rate	26,943,175
- Special long-term capital gains reserve	758,953,261
- Other reserves	16,620,583
	802,517,019

Common stock

	Number of shares	Par value
1. Common stock at January 1, 2001	134,715,873	€2
2. Common stock issued during the year	–	–
3. Common stock canceled during the year	–	–
4. Common stock at December 31, 2001	134,715,873	€2

There were no changes in capital during the year.

Operating revenue

In euros

Revenue for the year, consisting entirely of royalties, totaled €364,240,519. This amount breaks down as follows:

- France	55,249,757
- Outside France	308,990,762
	364,240,519

Income tax

Income tax for 2001 amounted to €415,485.

Market risks

a) Interest rate and currency risks

-Interest rates on loans to and from subsidiaries are determined in accordance with the Group's interest rate management policy. The Company is not exposed to any currency risk on these loans and borrowings.

-At December 31, 2001, the Company had receivables with a net book value of €80 million corresponding to royalties billed to subsidiaries. These receivables, which are denominated in the Group's main trading currencies, have been converted into euros at the year-end exchange rate or at the hedging rate.

b) Equity risk

The Company holds:

-Shares in subsidiaries and affiliates and other equity interests are valued taking into account their fair value to the Company and their probable realizable value.

-The net book value of marketable securities carried on the balance sheet - €153 million - is equal to their market value.

Management compensation

The Company is administered by Managing Partners *("Gérants")* who are also general partners *("associés commanditées")* of the Company. As such, they are entitled to a share of the income distributed among all the general partners in accordance with the provisions of the Company's bylaws. The Managing Partners do not receive any compensation or other benefits.

Average number of employees

	Employees on the Company's payroll	Employees seconded to the Company
Management	7	–
Supervisory/technical staff	–	–
Administrative employees	26	–
Service employees	–	1
	33	**1**

Post-retirement benefit obligations

The Company is liable for the payment of long-service awards to employees on retirement, in accordance with the terms of the applicable collective bargaining agreement. The discounted present value of the related obligation at December 31, 2001 was €0.7 million. No provision has been recorded for this amount.

Unrecognized deferred tax assets and liabilities

In euros

Description of temporary differences	
Unrecognized deferred tax liabilities	
Untaxed reserves	1,989,453
Unrecognized deferred tax liabilities	
- Reduced tax rate (19%)	377,996
- 3% surtax	11,340
- 3.3 % surtax	12,474
Total	**401,810**
Unrecognized deferred tax assets	
Non-deductible provisions and allowances	
- Provisions for contingencies and charges	-
- Allowances for impairment in value	-
Other	612,398
Evergreen tax losses	-
Ordinary tax losses	-
Long-term capital losses taxed at reduced rate	-
Unrecognized deferred tax assets	
- Reduced tax rate (19%)	116,356
- 3 % surtax	3,491
- 3.3 % surtax	3,840
Total	**123,687**

Investment portfolio at december 31, 2001

In euros

	Number of shares	Realizable value
Shares in subsidiaries and affiliates and other equity interests with a realizable value in excess of €152,449:		
Compagnie Financière Michelin	12,252,920 shares	1,502,100,738.75
Manufacture Frangaise des Pneumatiques Michelin	3,199,580 shares	555,934,412.35
Participation et Développement Industriels S.A. "Pardevi"	1,199,986 shares	144,367,415.05
Société de Technologie Michelin	99,994 shares	15,243,987.03
Spika S.A.	199,986 shares	25,914,518.79
Siparex Croissance	121,987 shares	1,909,893.66
Siparex Associés	115,152 shares	1,542,911.97
Société Financière d'Innovation du Sud-Est "Sudinnova"	21,786 shares	335,392.72
Société d'Exportation Michelin	20,000 shares	2,699,113.14
Other shares in subsidiaries and affiliates (total)		0 61
Marketable securities		
Own shares	4,140,457 shares	153,403,931.85
Marketable securities:		640.30

List of subsidiaries and affiliates

In euros

Subsidiaries and affiliates	Common stock *(1)*	Retained earnings *(1)*	Percent interest	Book value of snares	
				Cost	Net
A - Detail information about subsidiaries and affiliates ***(carrying value in excess of 1% of the Company's capital stock):***					
1 - Subsidiaries (over 50%-owned)					
Société d'Exportation Michelin Place des Carmes-Déchaux, 63000 Clermont-Ferrand - France	160,000 euros	1,911,371 euros	100	4,182,057	2,699,113
Participation et Developpement Industriels S.A. "Pardevi" 23, rue Breschet, 63000 Clermont-Ferrand - France	18,000,000 euros	- 169,844,565 euros	99.99	159,727,854	144,367,415
Compagnie Financière Michelin Route Louis-Braille 10 et 12, 1763 Granges-Paccot - Switzerland	1,404,831,200 Swiss francs	2,706,231,118 Swiss francs	91.67	1,502,100,739	1,502,100,739
Société de Technologie Michelin 23, rue Breschet, 63000 Clermont-Ferrand - France	15,200,000 euros	2,851,807 euros	99.99	15,243,987	15,243,987
Spika S.A. 23, rue Breschet, 63000 Clermont-Ferrand - France	3,000,000 euros	31,528,588 euros	99.99	25,914,519	25,914,519
2 - Affiliates (10% to 50%-owned)					
Manufacture Française des Pneumatiques Michelin Place des Carmes-Déchaux, 63000 Clermont-Ferrand - France	304,000,000 euros	721,628,972 euros	39.99	902,534,145	555,934,412
B - Aggregate information about other subsidiaries and affiliates					
1 - Subsidiaries not listed under A:					
- French companies				–	–
- Foreign companies				615,652	-
2 - Affliates not listed under A:					
- French companies				433	-
- Foreign companies				91,238	–

(1) In local currency.

In euros

Outstanding loans and advances	Guaranteed given by the Company	Last published net sales		Last published net income	Dividends received by the Company during the year
–	–	5,150,568	B	698,532	–
–	–	–	B	287,240,517	203,397,627
–	–	–	B	219,413,891	117,745,580
–	–	148,010,324	B	2,445,240	1,599,904
60,140,913	–	–	B	1,664,349	–
667,906,118	–	4,009,509,689	P	275,932,212	–
–	–				–
–	–				–
–	–				–
–	–				–

Statement of changes in Shareholders' equity

In euros

(Before appropriation of net income. Company only)

	2000	2001
Net income for the year (in thousands of euros and euros per share)		
Net income		
Total net income	263,620	452,871
Earnings per share	1.96	3.36
Recommended dividend		
Total	107,772	114,508
Per share	0.80	0.85
Statement of changes in shareholders' equity (in thousands of euros)		
A) 1 - Shareholders' equity at December 31, 2000		3,449,553
2 - 2000 dividend		133,526
3 - Shareholders' equity at January 1, 2001		3,316,027
B) Capital contributions credited to opening shareholders' equity:		
1 - Increase in common stock		-
2 - Increase in other items		-
C) Shareholders' equity at January 1, 2001 including capital contributions (A3 + B)		3,316,027
D) Movements for the year		
1 - Increase in common stock		-
2 - Increase in paid-in capital in excess of par		-
3 - Increase in revaluation reserve		462
4 - Change in other reserves		–
5 - Change in untaxed reserves		–
6 - Increase in retained earnings		3,110
7 - Net income for the year		452,871
E) Shareholders' equity at December 31, 2001 before dividends (C + D)		3,772,470
F) Change in shareholders' equity (E - C)		**456,443**
G) o/w: changes due to structural changes		-
H) Change in shareholders' equity excluding effect of structural changes (F - G)		**456,443**
Notes:		
D3: - Amounts transferred to the revaluation reserve during the year		462
D6: - Dividends on own shares credited to retained earnings		3,110

Appropriation of 2001 net income

In euros

Amounts to be appropriated		
Retained earnings brought forward from prior year		45,587,019.80
Net income		452,871,105.91
Recommended appropriations		
Legal reserve	–	
Special long-term capital gains reserve	315,163,220.11	
Dividend	114,508,492.05	
Income attributed to the General Partners in accordance with the bylaws	3,139,441.47	
Tax on distributed earnings	22,134,174.00	
Other reserves	-	
Retained earnings	43,512,798.08	
Total	**498,458,125.71**	**498,458,125.71**

Five-year financial summary

In euros

	1997	1998	1999	2000	2001
I - Capital at year-end					
a) Common stock	250,430,381	251,935,794	269,431,746	269,431,746	269,431,746
B) Number of common shares outstanding	136,892,968	137,715,873	134,715,873	134,715,873	134,715,873
c) Number of non-voting preferred shares outstanding	-	-	-	-	-
d) Maximum number of shares to be created	-	-	-	-	-
II - Results of operations					
a) Net revenues	84,605,104.22	272,554,108.48	296,709,451.18	335,562,960.73	364,240,518.88
b) Income before tax, depreciation, amortization and provision expense	128,682,124.31	138,095,222.66	252,473,518.63	257,749,796.33	457,409,251.36
c) Income tax	26,404,610.82	49,697,914.19	32,037,388.53	26,366,015.41	415,485.00
d) Employee profit-sharing	-	-	-	-	-
e) Net income	192,361,544.60	254,410,770.22	247,399,260.17	263,620,238.61	452,871,105.91
III - Per share data					
a) Earnings per share before tax, after depreciation, amortization and provision expense	0.75	0.64	1.64	1.72	3.39
b) Earnings per share	1.41	1.85	1.84	1.96	3.36
c) Dividend per share					
- Series A capital shares	0.59	0.66	-	-	-
- Series A beneficial-ownership shares and Series B shares	0.58	0.64	-	-	-
- Common shares	-	-	0.71	0.80	0.85
IV - Employee data					
a) Average number of employees	32	33	32	33	33
b) Total payroll	1,258,445.54	1,299,028.20	1,136,874.59	1,147,039.19	1,110,087.78
c) Total benefits	482,490.79	501,794.58	444,061.94	459,331.75	435,795.99

Statutory Auditors' general Report on the annual Financial Statements

Year ended December 31, 2001

To the Shareholders,

In accordance with the terms of our appointment at the Annual Shareholders' Meeting, we hereby submit our report for the year ended December 31, 2001, on:

- our examination of the financial statements of Compagnie Générale des Etablissements Michelin, presented in euro, as attached to this report,

- the specific procedures and information required by law.

These financial statements have been approved by the Managing Partners. Our responsibility is to express an opinion on these financial statements based on our audit.

1. Opinion on the financial statements

We conducted our audit in accordance with professional standards applied in France. Those standards require that we plan and perform our audit to obtain reasonable assurance that the financial statements are free from material misstatement.

An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made in the preparation of the financial statements, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements present fairly, in all material respects the assets and liabilities and financial position of the Company at December 31, 2001 and the results of operations for the year then ended.

2. Specific procedures and information

We have also performed the specific procedures required by law, in accordance with professional standards applied in France.

We are satisfied that the information given in the Managing Partners' Report and the documents sent to shareholders on the financial position and financial statements is fairly stated and agrees with those financial statements.

As required by law, we have also verified that details of the identity of shareholders are disclosed in the Managing Partners' Report.

Paris, March 5, 2002

Dominique PAUL

Stéphane MARIE

Statutory Auditors

Members of the Compagnie Régionale de Paris

Statutory Auditors' special Report on Regulated Agreements

Year ended December 31, 2001

To the Shareholders,

In our capacity as Statutory Auditors of your Company, we are required to report to shareholders on agreements involving directors that have been disclosed to us by the Company's management. Our responsibility does not include identifying any undisclosed agreements.

We have not been informed of any agreements governed by article L.226-10 of the Commercial Code.

Paris, March 5, 2002

Dominique PAUL Stéphane MARIE

Statutory Auditors
Members of the Compagnie Régionale de Paris

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Detailed data concerning the world tire market is available on Internet: www.michelin.com.
The 2001 Fact book is also available on request on CD-Rom. Simply contact the Investor Relations Department.

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Compagnie Générale des Etablissements Michelin
Michelin et Cie
Headquarters: 12, cours Sablon - Clermont-Ferrand (Puy-de-D6me) - France

Impression : SIMAN

from
PUBLIC RELATIONS
B. F. Goodrich
AKRON, OHIO

AKRON, OHIO, DECEMBER 17, 1954 -- Goodrich-Gulf Chemicals, Inc., a company owned half by The B. F. Goodrich Company and half by Gulf Oil Corporation, has agreed to purchase two Government-owned synthetic rubber facilities in Port Neches, Texas, it was announced today by W. S. Richardson, president of Goodrich-Gulf Chemicals, Inc. Mr. Richardson is also president of The B. F. Goodrich Company.

Agreement to purchase Plancor 983, a 90,000 long ton GR-S copolymer plant, now operated by B. F. Goodrich Chemical Company, and an undivided half interest in Plancor 933, a 197,000 short ton butadiene plant, presently operated for the Government by Neches Butane Products Corporation, both in Port Neches, was reached in Washington, D.C. Friday by officials of Goodrich-Gulf Chemicals, Inc., and the Rubber Producing Facilities Disposal Commission.

The Texas Company and the United States Rubber Company, it is understood, have also agreed to purchase an undivided half interest in the butadiene plant sharing power and other central plant service facilities with Goodrich-Gulf Chemicals, Inc.

Butadiene, derived from petroleum, is a major raw material required for the manufacture of GR-S, the Government's general purpose American rubber.

Under the terms of Rubber Producing Facilities Disposal Act of 1953, enacted by the 83rd Congress, the Disposal Commission has 30 days, or not later than January 31, 1955, to submit a report to Congress on these and other proposals to purchase the rubber-making facilities.

By the end of January, 1955 the Disposal Commission must submit its contract recommendations, along with those of the Attorney General, for Congressional review.

Contracts neither vetoed nor withdrawn within 60 days, become effective, provided they include sale of enough facilities to produce at least 500,000 long

S-149 LITHO. IN U.S.A.

tons of GR-S synthetic rubber annually, and 43,000 long tons of butyl rubber.

B. F. Goodrich built for the Government, the two copolymer plants at Port Neches now having a total rated capacity of 180,000 tons, and has operated one of the two plants continuously since 1943. Butadiene for these plants comes by pipe-line from Plancor 933 a few hundred feet away. Gulf, Texas, Pure Oil, Atlantic and Magnolia Oil companies were the original constituent companies in Neches Butane Products Company.

- o -

12-1754

From
PUBLIC RELATIONS
Goodrich-Gulf
Chemicals, Inc.
[illegible] STREET
[illegible] BUILDING
CLEVELAND, OHIO [illegible]

Contact: Cleveland Lane
216/861-3500

FOR RELEASE: MONDAY,
JUNE 26, 1967

BACKGROUND INFORMATION

AMERIPOL CB RUBBERS

Ameripol CB 441 is produced in a special process developed by Goodrich-Gulf, one of the nation's leading producers of synthetic rubber. It is a high-Mooney viscosity, cis-polybutadiene rubber extended with 37.5 parts of highly aromatic oil. Repeated tests have shown that this polymer produces tread wear results equal to non-oil extended cis-polybutadienes at a lower compounding cost.

The physical properties of Ameripol CB 441 are equal to or surpass most of those of natural rubber and it can be used as a direct replacement for natural rubber in many applications.

It has a higher abrasion resistance than natural rubber. Its rebound, or resilience, is also higher and, related to this, its resistance to hysteresis heat build-up is equal to or better than most natural rubber compounds. These properties are important in such heavy-duty applications as truck tires, conveyor belt covers, power transmission belting, hose covers and chute liners.

Ameripol CB 441's low hysteresis heat build-up and good flex properties are also important in other applications, such as vibration dampers or shock absorbers. It will retain most of its good physical properties, such as flexibility, at temperatures far below those at which other rubbers become brittle, an important factor in military and aircraft applications. Its resistance to aging and oxidation is also superior to natural rubber.

(MORE)

Ameripol CB 441 has been tested in a wide variety of applications and more than seven million miles of tire tests have been run to date. In blends of Ameripol CB 441 with SBR (styrene-butadiene rubber) in passenger tire treads, wear was 25 to 65 percent better than control tires.

Goodrich-Gulf has recently started production of a new cis-polybutadiene called Ameripol CB Micro-Black in which carbon black and oil are incorporated while the rubber is in solution during the rubber-making process.

The properties of Ameripol CB Micro-Black are similar to Ameripol CB 441. However, Ameripol CB Micro-Black allows the processor to eliminate in-plant storage and handling of carbon black, eliminate time-consuming weighing and mixing operations and improve the dispersion of carbon black in the rubber.

The use of Ameripol CB Micro-Black will improve abrasion resistance, low-temperature resistance, resilience, resistance to aging and reversion. It also has low water absorption characteristics.

Ameripol CB Micro-Black is designed primarily for use in the treads of new passenger and truck tires and for the production of tread rubber, or camelback, for retreading tires.

Potential non-tire uses includes belting, molded goods and other industrial products.

In addition to Ameripol CB 441 and Ameripol CB Micro-Black, Goodrich-Gulf also produces several other types of cis-polybutadienes, including Ameripol CB 220 (a non-oil polymer) and CB 1202 (a high-purity type for reinforcing polystyrene plastic).

SYNPOL INC

Port Neches, Texas

PROCESS DESCRIPTION

SYNPOL INC produces two basic synthetic rubbers. Styrene-Butadiene Rubber, SBR, a copolymer of styrene and butadiene, is the general purpose rubber introduced as GR-S during World War II and later developed into a wide range of products which now serve the rubber industry for the manufacture of a variety of articles from automobile tires to bowling balls. Emulsion-Butadiene Rubber, E-BR, is a SYNPOL development and, as the name implies, is a polymer of butadiene. Although it can be used in many of the products in which SBR is used, E-BR is particularly attractive in tire tread application, where it has unusual traction properties. The two products are made in the same manner, so that a single process description applies to both.

The manufacturing process consists of three basic steps. First, butadiene and styrene are polymerized in the "polymerization unit", which consists of four groups of twelve reactors connected in series, each group called a reactor train. Second, unreacted monomers are recovered in the "recovery unit". Finally, the solid polymer is separated from latex and dried in the "process unit".

Butadiene and styrene are the chief raw materials from which SBR and E-BR are made. However, there are many other critical chemicals involved in the process and these raw materials undergo extensive quality control testing before entering the process. Incoming hydrocarbons, for example, are analyzed by gas chromatography to determine their "purity" and to detect the presence of small quantities of impurities which may inhibit polymerization. The other materials, soaps, activator materials, modifiers, and oxidant, are carefully analyzed in the laboratory and are tested for polymerization performance in actual polymerization recipes on a laboratory scale.

In the first step of the process, the hydrocarbon monomers (butadiene and styrene) are mixed with the various other components in the polymerization unit. These components and their functions are: modifier (tertiary mercaptan) for regulation of polymer chain length; soap solution (a 50:50 blend of the soaps of fatty acids and rosin acids) to emulsify the hydrocarbons into micelles, i.e., fine droplets covered by a layer of ionized soap molecules; deionized water to form the aqueous phase for micelle formation; an oxidant or initiator (an organic peroxide) to provide free radicals to initiate and sustain the polymerization; and an activator to activate the oxidant.

The combined charge stream mixture, consisting of all of these ingredients in carefully controlled proportions, passes through a mixing pump to homogenize the mixture and then into the first vessel of the reactor train where polymerization begins. From this point on the mixture is called "latex". Charge rate is adjusted so that residence time in the reactor train is approximately eight hours, the time required to reach the desired conversion. During polymerization, gamma gauges monitor the latex stream to insure close control of monomer conversion.

When polymerization reaches 58% conversion, which along with proper modifier charge produces the desired polymer chain length, a shortstop solution (strong reducing agent) is injected into the latex to destroy the free radicals and any residual organic peroxide. This prevents any further polymerization as the latex is processed. Since only 58% of the initial hydrocarbon charged is converted to rubber, the remaining 42% must be recovered and re-used. The recovery of the hydrocarbons is accomplished in the recovery unit in two steps. The latex goes first to a series of two flash tanks where the unreacted butadiene is rapidly vaporized under vacuum. It then goes to a stripping tower where the unreacted styrene is steam distilled under vacuum. Both the butadiene and the styrene are collected and re-used.

The stripped latex is pumped to large intermediate storage vessels and then to smaller blending tanks in the process unit where antioxidant and oil emulsion are added. The antioxidant protects the finished product from oxygen attack during storage. The "processing" oil softens the polymer so that the finished product may be easily compounded in conventional compounding recipes.

The rubber is removed from the latex in the coagulation step. A stream of concentrated brine is injected into the latex and then weak sulfuric acid is added at the coagulation pump. The pump discharges into an agitated tank where the coagulation is completed. The resulting slurry of rubber crumb in aqueous serum passes into a larger agitated tank called the soap conversion tank and then to a vibrating screen filter to separate the crumb from the serum. The crumb is water-washed in a leach tank and is sent to a dewatering device which removes most of the water from the crumb. A three-pass steam heated dryer then completes the drying process.

The dried crumb is pressed into 80-pound bales which are conveyed through a metal detector to a wrapping machine where they are sealed in polyethylene film. Finally, the bales are packed in twenty-six hundred pound cardboard cartons for shipment.

Several different polymer types are produced in this same basic process. By varying the butadiene-styrene ratio, kind of soap, antioxidant, or extender oil specific products can be "tailor-made" for use in the manufacture of a wide variety of rubber articles. Automobile tires, sponge rubber carpet cushion, shoe soles, rubber cement, steering wheels and bowling balls are just a few examples.

Rigid controls are necessary to produce the desired properties of each polymer type. Thus, in addition to the testing of raw materials mentioned earlier, numerous in-process analyses are performed to guarantee that the product will meet certain definite specifications. Finally, the finished product is thoroughly tested before being released for shipment.

REM/js

10/12/73

PART A
QUESTION NO. 5

12 of 12 DOCUMENTS

UNDERGROUND/ABOVEGROUND STORAGE TANKS (USTAST)

*** Information Extracted from VISTA database on 02-20-2002 ***

BF GOODRICH - AMERIPOL SBR DIV

1215 MAIN ST

PORT NECHES, TX 77651

Site ID: 0032278

VISTA ID: 3669047

Facility ID #: 0032278
Facility Name: BF GOODRICH - AMERIPOL SBR DIV
Facility Address: 1215 MAIN ST, PORT NECHES, TX, 77651

TNRCC Region #: 10
Date Registration Rcvd: 05/08/86
Total Underground Tanks: 0006
Total Aboveground Tanks: 0000
Facility Manager/Title: WADE RICHARDS
Facility Manager Phone #: 4097248825

TNRCC Customer #: 15279
Owner Name: AMERIPOL SYNPOL COMPANY, PO BOX 667, PORT NECHES, TX, 77651
Owner Phone #: 4097224301
Owner Type: PRIVATE OR CORPORATE

Tank ID #: 1
Unit ID #: 00084756
Tank Capacity (G): 0004000
Tank Status: PERM. FILLED IN PLACE
Tank Status Date: 12/30/88
Tank Installation Date: 01/01/61
Tank Registration Date: 05/08/86
Tank Material: STEEL
Piping Material: STEEL
Tank Corrosion Protection Variance: NO VARIANCE
Piping Corrosion Protection (Other): NONE
Piping Corrosion Protection Variance: NO VARIANCE
Stage 1 Vapor Recovery Equipment: NO VARIANCE
Stage 2 Vapor Recovery Equipment: NO VARIANCE

Tank ID #: 2
Unit ID #: 00084757
Tank Capacity (G): 0002000

Tank Status: PERM. FILLED IN PLACE
Tank Status Date: 12/30/88
Tank Registration Date: 05/08/86
Tank Material: STEEL
Piping Material: STEEL
Tank Corrosion Protection (Other): NONE
Tank Corrosion Protection Variance: NO VARIANCE
Piping Corrosion Protection (Other): NONE
Piping Corrosion Protection Variance: NO VARIANCE
Stage 1 Vapor Recovery Equipment: NO VARIANCE
Stage 2 Vapor Recovery Equipment: NO VARIANCE

Tank ID #: 5
Unit ID #: 00084758
Tank Capacity (G): 0005300
Tank Status: PERM. FILLED IN PLACE
Tank Status Date: 01/30/74
Tank Registration Date: 05/08/86
Tank Material: STEEL
Piping Material: STEEL
Tank Corrosion Protection (Other): NONE
Tank Corrosion Protection Variance: NO VARIANCE
Piping Corrosion Protection (Other): NONE
Piping Corrosion Protection Variance: NO VARIANCE
Stage 1 Vapor Recovery Equipment: NO VARIANCE
Stage 2 Vapor Recovery Equipment: NO VARIANCE

Tank ID #: 6
Unit ID #: 00084759
Tank Capacity (G): 0001300
Tank Status: PERM. FILLED IN PLACE
Tank Status Date: 01/30/74
Tank Registration Date: 05/08/86
Tank Material: STEEL
Piping Material: STEEL
Tank Corrosion Protection (Other): NONE
Tank Corrosion Protection Variance: NO VARIANCE
Piping Corrosion Protection (Other): NONE
Piping Corrosion Protection Variance: NO VARIANCE
Stage 1 Vapor Recovery Equipment: NO VARIANCE
Stage 2 Vapor Recovery Equipment: NO VARIANCE

Tank ID #: 3
Unit ID #: 00084760
Tank Capacity (G): 0001000
Tank Status: PERM. FILLED IN PLACE
Tank Status Date: 12/30/88
Tank Registration Date: 05/08/86
Tank Material: STEEL
Piping Material: STEEL
Tank Corrosion Protection (Other): NONE
Tank Corrosion Protection Variance: NO VARIANCE
Piping Corrosion Protection (Other): NONE
Piping Corrosion Protection Variance: NO VARIANCE
Stage 1 Vapor Recovery Equipment: NO VARIANCE

Stage 2 Vapor Recovery Equipment: NO VARIANCE

Tank ID #: 4
Unit ID #: 00084761
Tank Capacity (G): 0002000
Tank Status: PERM. FILLED IN PLACE
Tank Status Date: 12/30/88
Tank Registration Date: 05/08/86
Tank Material: STEEL
Piping Material: STEEL
Tank Corrosion Protection (Other): NONE
Tank Corrosion Protection Variance: NO VARIANCE
Piping Corrosion Protection (Other): NONE
Piping Corrosion Protection Variance: NO VARIANCE
Stage 1 Vapor Recovery Equipment: NO VARIANCE
Stage 2 Vapor Recovery Equipment: NO VARIANCE

Tank Contents: GASOLINE
Tank Release Detection (Other): NONE

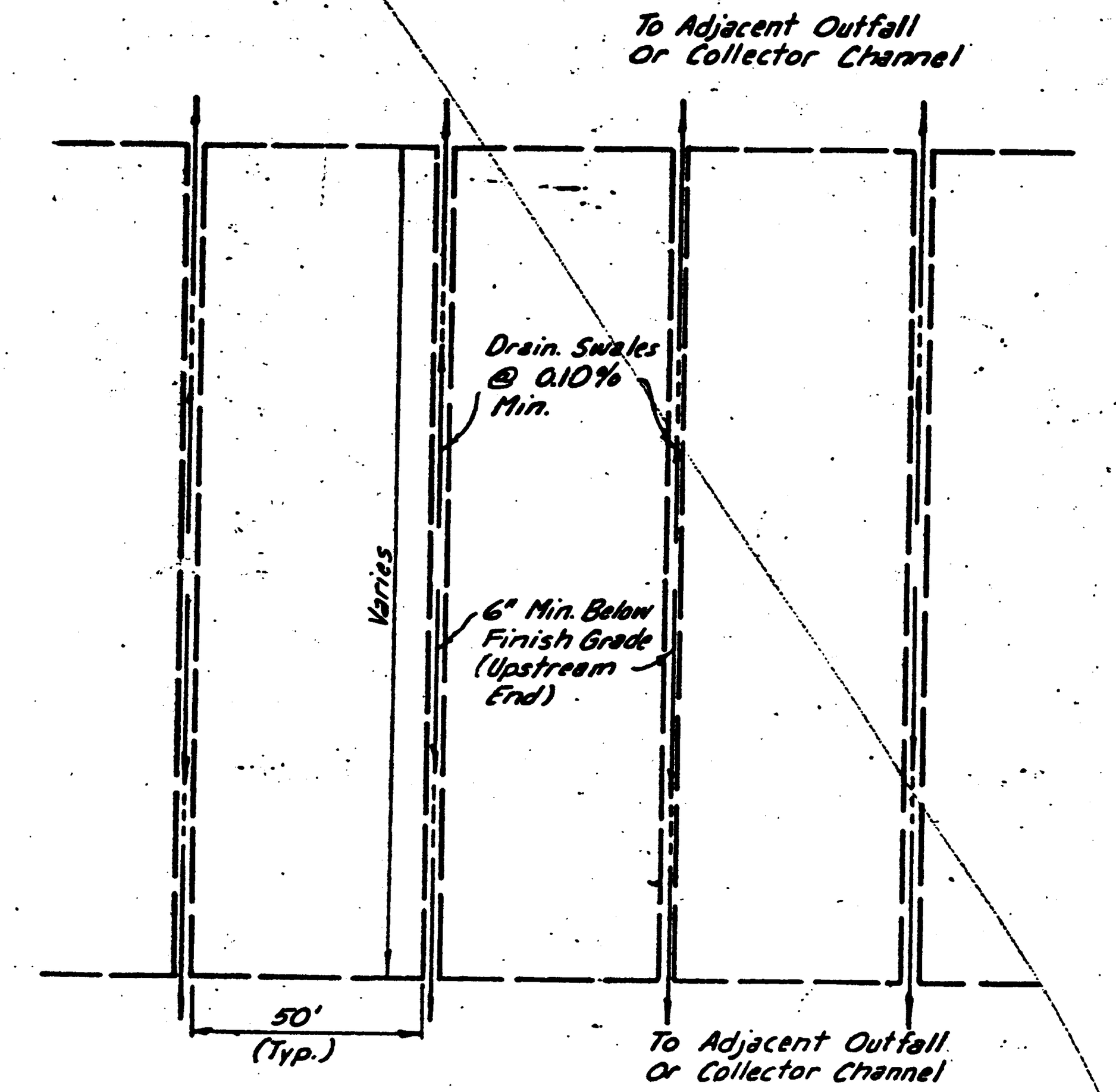
Tank Contents: GASOLINE
Tank Release Detection (Other): NONE

Tank Contents: USED OIL
Tank Release Detection (Other): NONE

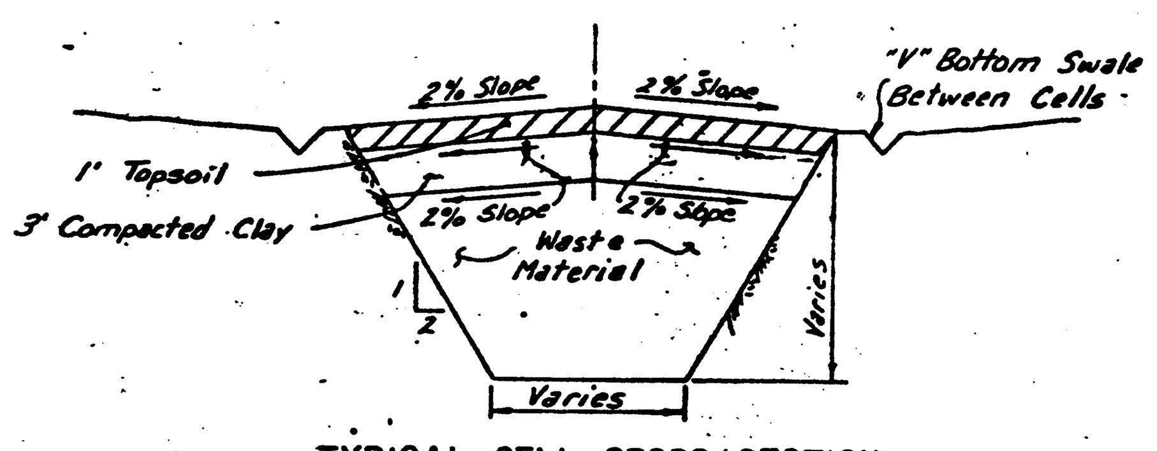
Tank Contents (Other): EMPTY
Tank Release Detection (Other): NONE

Tank Contents: GASOLINE
Tank Release Detection (Other): NONE

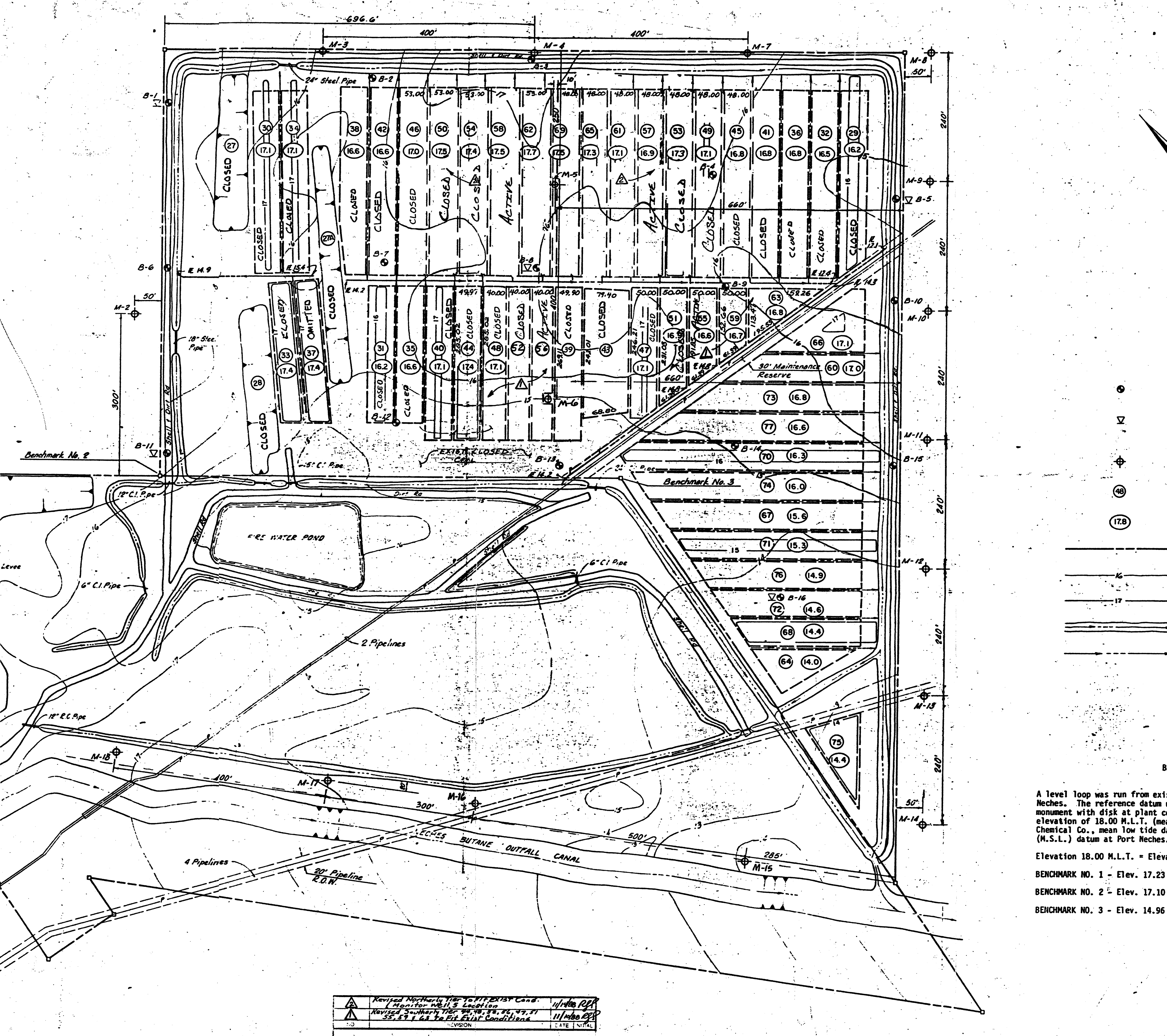
Tank Contents: KEROSENE
Tank Release Detection (Other): NONE

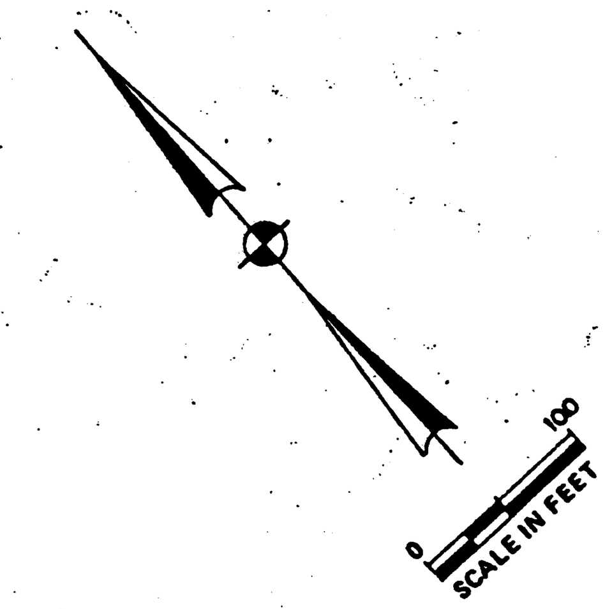


TYPICAL CELL PLAN
N.T.S.



TYPICAL CELL CROSS SECTION
N.T.S.





LEGEND

⊕	TEST BORING LOCATION FOR NEW WASTE DISPOSAL AREA
∇	INDICATES THAT BORING WAS CONVERTED TO GROUDWATER OBSERVATION WELL
⌖	PROPOSED MONITOR WELL LOCATION
(48)	PROPOSED CELL REFERENCE NO.
(17.8)	FINISHED CENTERLINE ELEVATION
——— — — ———	PROPERTY LINE
——16——	EXISTING CONTOUR LINE
——17——	PROPOSED CONTOUR LINE
═══	EXISTING DITCH
——→- - -→——	PROPOSED DITCH

BENCHMARK INFORMATION

A level loop was run from existing monumentation at Texaco Chemical Co., Port Neches. The reference datum used for this survey is based on a concrete monument with disk at plant coordinates N 9985.00, E 3000.00 with an elevation of 18.00 M.L.T. (mean low tide). Based on information from Texaco Chemical Co., mean low tide datum is 0.79 feet lower that mean sea level (M.S.L.) datum at Port Neches.

Elevation 18.00 M.L.T. = Elevation 17.21 M.S.L.

BENCHMARK NO. 1 - Elev. 17.23 - Concrete monument with disk.

BENCHMARK NO. 2 - Elev. 17.10 - ½" dia. iron rod in concrete.

BENCHMARK NO. 3 - Elev. 14.96 - Concrete monument with disk.

NO.	REVISION	DATE	INITIAL
2	Revised Northerly Tier To Fit Exist Cond. / Monitor Well 5 Location	11/14/88	RJA
1	Revised Southerly Tier 44, 48, 52, 56, 47, 51, 55, 59 & 63 To Fit Exist Conditions	11/10/88	RJA

AMERIPOL / SYNPOL COMPANY

REVISED CELL LAYOUT

COMMON LANDFILL
PORT NECHES, TEXAS

RON ARCENEAUX & ASSOCIATES
Consulting Engineers • Land Surveyors

SHEET 1 OF 1

Date: Nov. 1988	Scale: AS SHOWN	Drawn: JA
Job No. SWL-86-545 RAIA-88-060	Designed: RJA	Checked: RJA

REF. DWGS. G 1609
E 1812

PROPOSED CELL ARRANGEMENT
COMMON LANDFILL AREA

B. F. GOODRICH COMPANY, INC.
PORT NECHES, TEXAS

Turner Collie & Braden Inc.
CONSULTING ENGINEERS
TEXAS AUSTIN DALLAS EL PASO HOUSTON PORT ARTHUR
COLORADO DENVER GRAND JUNCTION

JOB NO. 46-00016-010 APRIL, 1985

EXHIBIT 2

E-1883-2C

PART A
QUESTION NO. 7

ASSET PURCHASE AGREEMENT
BETWEEN
THE UNIROYAL GOODRICH TIRE COMPANY
AND
AMERIPOL SYNPOL CORPORATION,
DATED DECEMBER 17, 1992

SCHEDULE 3.1 (i)

Permits; Compliance with Law

List of Permits:

Water

NPDES (U.S. EPA) -	Permit No. TX0087602 Plant Site Stormwater (30-day advance transfer application pending.)
Texas Water Commission -	Permit No. 02487 Plant Site Stormwater (30-day advance transfer application pending; Form TWC-0095 to be filed post closing.)
Texas Water Commission -	Permit No. 03333 Common Landfill Site Stormwater (30-day advance transfer application pending; Form TWC 0095 to be filed post closing.)
NPDES (U.S. EPA) -	Common Landfill Site Stormwater Submitted application on 9/28/92; supplemented 11/23/92. (Name change notice to be given post-closing.)

Joint Wastewater Treatment Plant (Texaco is permittee):

- NPDES (U.S. EPA) - Permit No. TX0005070
  (No transfer or notice required.)
- Texas Water Commission - Permit No. 00511
  (No transfer required. Notice to be given post-closing.)

Solid Waste

Texas Water Commission - Permit No. SW39062
Common Landfill Solid Waste Disposal
Class II & III wastes.
(30-day advance transfer application pending.)

City of Port Neches - Excavation Permit
(Re-appear before Zoning Commission)

Registrations (generator identification number):
- Texas Water Commission - Registration No. 30144
- U.S. EPA - ID No. TXD059333443

(Name change notice to be given post-closing - no transfer required.)

Air

Texas Air Control Board -Permit No. C-9908
Dryer Replacement for E, C & I Dryers
(amendment submitted 10/27/92 for A, B, M & N dryer replacement)
(Notice to be given post-closing, no transfer required.)

Texas Air Control Board -Permit No. R-4132A
River Dock Flare
(Transfer application to be filed within 30 days after closing.)

Texas Air Control Board -Permit No. C-9351
Permit Exemption for S & T Dryer Replacement
(Transfer application to be filed within 30 days after closing.)

Texas Air Control Board Permit Exemptions:
(No transfer or notice required.)

"D" Dryer	X-1481
"F" Dryer	X-15069
"G" Dryer	X-561
"H" Dryer	Verbal approval
"K" & "L" Dryers	X-16456
"P" & "R" Dryers	C-9100
"S" & "T" Dryers	C-9351

Radiation

Texas Dept. of Health	License No. L00077 (No transfer required. Post-closing notice should be given.)
Texas Dept. of Health	General License, no number (No transfer or notice required.)

Radio License

Federal Communication Commissions:
(Transfer application to be submitted post-closing.)

FCC File No. 8607044880
FCC File No. 8607044827
FCC File No. 205528-PF-076
FCC File No. 15864-IX-67
FCC File No. 9234-IX-14

(i)

None

(ii)

None

(iii)

April 18, 1992 notice from Texas Air Control Board setting forth 25 incidents of exceedence of the 200 ppm styrene limit in waste water imposed by TACB Agreed Board Order No. 90-09A.

July 10, 1991 notice from Texas Air Control Board regarding alleged violations of the Texas General Nuisance Odor Regulation No. 101.3 and TACB Agreed Board Order No. 90-09A with respect to styrene odors in surrounding neighborhood.

Multi-Media Audit by US EPA Region VI completed in January 1991 resulted in admistrative finding of approximately 18 alleged violations of NPDES permit (Docket Nos. VI-91-1098 and VI-92-1619). Proposed resolution, i.e. assessment of a Class II penalty, currently under negotiation.

(iv)

Seller timely reapplied for re-issuance of its NPDES permit. The new permit included revised language prohibiting the discharge of any process water. An adjudicatory hearing has been requested for the purpose of restoring the former permit language. Time would be necessary to effect modifications to the plant drainage systems under the revised permit conditions.

PART A
QUESTION NO. 8

ESATNV18

Engineering-Science

ANALYTICAL RESULTS SUMMARY

ES Job No. ZA060
Client DON BOYLE, ES ATLANTA
Project UGTC, PORT NECHE, TX
Date Collected 11/16/89
Date Received 11/17/89

Sample Matrix:
/ X / Water
/ / Soil
/ X / Other: POND SEDIMENT

Laboratory Supervisor Approval:

Parameter	Field Sample No. / Laboratory Sample No.	PN-WW-1 89111221	PN-SL-1 89111222	PN-WW-2 89111223	EPA Method No.	Date of Analysis
ARSENIC, mg/L *		<0.01	<0.01	<0.01	7061	11/20
BARIUM, mg/L *		<5.0	<5.0	<5.0	7080	11/21
CADMIUM, mg/L *		<0.05	<0.05	<0.05	7130	11/20
CHROMIUM, mg/L *		<0.10	<0.10	<0.10	7190	11/20
LEAD, mg/L *		<0.20	<0.20	<0.20	7420	11/20
MERCURY, mg/L *		<0.02	<0.02	<0.02	7470	11/21,22
SELENIUM, mg/L *		<0.01	<0.01	<0.01	7741	11/20
SILVER, mg/L *		<0.10	<0.10	<0.10	7760	11/21

* Concentration In TCLP Leachate Per Title 40 CFR, Part 268, Appendix 1.

Jesse L. Smith
Laboratory Director

James W. Andrews, Ph.D.
President

Jeanette Davis Long
Vice-President

SAVANNAH LABORATORIES AND ENVIRONMENTAL SERVICES, INC.

MOBILE, ALABAMA DIVISION
3707 Cottage Hill Road (36609)
P. O. Box 9248 • Mobile, AL 36691-0248
Phone (205) 666-6633 • Fax (205) 666-6696

LOG NO: 89-9674

Received: 20 NOV 89

Mr. David Jones
Engineering Science Laboratory
2585 Chantilly Dr. NE
Atlanta, GA 30324

PARTIAL
REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
9674-1	89-11-1221 11/15/89	Client
9674-2	89-11-1223 11/16/89	

PARAMETER	PN-WW-1 9674-1	PN-WW-2 9674-2
TCLP extraction - non-volatile		
Phases	1	2
% Solids	<0.5%	23%
% that passes 9.5 mm sieve	100%	100%
pH (7.12.2)	7.4	8.4
pH (7.12.4)	NA	5.8
Extraction Fluid	NA	#2
Semivolatiles in TCLP extract		
Bis(2-chloroethyl)ether (TCLP), mg/l	<0.010	<0.010
Cresol o,m,p (TCLP), mg/l	<0.010	<0.010
1,2-Dichlorobenzene (TCLP), mg/l	<0.010	<0.010
1,4-Dichlorobenzene (TCLP), mg/l	<0.010	<0.010
2,4-Dinitrotoluene (TCLP), mg/l	<0.010	<0.010
Hexachlorobenzene (TCLP), mg/l	<0.010	<0.010
Hexachlorobutadiene (TCLP), mg/l	<0.010	<0.010
Hexachloroethane (TCLP), mg/l	<0.010	<0.010
Nitrobenzene (TCLP), mg/l	<0.010	<0.010
Pentachlorophenol (TCLP), mg/l	<0.050	<0.050
Phenol (TCLP), mg/l	<0.010	<0.010
2,3,4,6-Tetrachlorophenol (TCLP), mg/l	<0.010	<0.010
2,4,5-Trichlorophenol (TCLP), mg/l	<0.010	<0.010
2,4,6-Trichlorophenol (TCLP), mg/l	<0.010	<0.010

James L. Smith
Laboratory Director

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LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
9674-1	89-11-1221 11/15/89	Client
9674-2	89-11-1223 11/16/89	

PARAMETER	PN-WW-1 9674-1	PN-WW-2 9674-2
Pesticides in TCLP extract		
Chlordane (TCLP), ug/l	<1.0	<1.0
Endrin (TCLP), ug/l	<0.20	<0.20
Heptachlor (& hydroxide) (TCLP), ug/l	<0.10	<0.10
Lindane (g-BHC) (TCLP), ug/l	<0.10	<0.10
Methoxychlor (TCLP), ug/l	<100	<100
Toxaphene (TCLP), ug/l	<10	<10
Herbicides in TCLP, ug/l	<1.0	<1.0
TCLP extraction volatiles ZHE		
Phases	2	2
% Solids	<0.5 %	22 %
% that passes 9.5 mm sieve	100 %	100 %

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PARTIAL
REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , LIQUID SAMPLES	SAMPLED BY
9674-1	89-11-1221 11/15/89	Client
9674-2	89-11-1223 11/16/89	

PARAMETER	PN-WW-1 9674-1	PN-WW-2 9674-2
Volatiles in TCLP extract		
Acrylonitrile (TCLP), ug/l	<5000	<1000
Benzene (TCLP), ug/l	<500	420
Carbon disulfide (TCLP), ug/l	<500	<100
Carbon tetrachloride (TCLP), ug/l	<500	<100
Chlorobenzene (TCLP), ug/l	<500	<100
Chloroform (TCLP), ug/l	<500	<100
1,2-Dichloroethane (TCLP), ug/l	<500	<100
1,1-Dichloroethylene (TCLP), ug/l	<500	<100
Isobutanol (TCLP), ug/l	<10000	<2000
Methylene Chloride (TCLP), ug/l	<500	<100
Methyl ethyl ketone (TCLP), ug/l	<1000	<200
Pyridine (TCLP), ug/l	<100000	<20000
1,1,1,2-Tetrachloroethane (TCLP), ug/l	<500	<100
1,1,2,2-Tetrachloroethane (TCLP), ug/l	<500	<100
Tetrachloroethylene (TCLP), ug/l	<500	<100
Toluene (TCLP), ug/l	<500	<160
1,1,1-Trichloroethane (TCLP), ug/l	<500	<100
1,1,2-Trichloroethane (TCLP), ug/l	<500	<100
Trichloroethylene (TCLP), ug/l	<500	<100
Vinyl chloride (TCLP), ug/l	<1000	<200
Styrene, ug/l	17000	1800
Ethylbenzene, ug/l	1800	11000

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LOG NO: 89-9674

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2585 Chantilly Dr. NE
Atlanta, GA 30324

PARTIAL
REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
9674-3	89-11-1222 11/15/89 PN-SL-1	Client

PARAMETER	9674-3
TCLP extraction - non-volatile	
Phases	1
% Solids	100%
% that passes 9.5 mm sieve	100%
pH (7.12.2)	8.7
pH (7.12.4)	1.5
Extraction Fluid	#1
Semivolatiles in TCLP extract	
Bis(2-chloroethyl)ether (TCLP), mg/l	<0.010
Cresol o,m,p (TCLP), mg/l	<0.010
1,2-Dichlorobenzene (TCLP), mg/l	<0.010
1,4-Dichlorobenzene (TCLP), mg/l	<0.010
2,4-Dinitrotoluene (TCLP), mg/l	<0.010
Hexachlorobenzene (TCLP), mg/l	<0.010
Hexachlorobutadiene (TCLP), mg/l	<0.010
Hexachloroethane (TCLP), mg/l	<0.010
Nitrobenzene (TCLP), mg/l	<0.010
Pentachlorophenol (TCLP), mg/l	<0.050
Phenol (TCLP), mg/l	<0.010
2,3,4,6-Tetrachlorophenol (TCLP), mg/l	<0.010
2,4,5-Trichlorophenol (TCLP), mg/l	<0.010
2,4,6-Trichlorophenol (TCLP), mg/l	<0.010

James L. Smith
Laboratory Director

James W. Andrews, Ph.D.
President

Jeanette Davis Long
Vice-President

SAVANNAH LABORATORIES
AND ENVIRONMENTAL SERVICES, INC.
MOBILE, ALABAMA DIVISION
3707 Cottage Hill Road (36609)
P. O. Box 9248 • Mobile, AL 36691-0248
Phone (205) 666-6633 • Fax (205) 666-6696

LOG NO: 89-9674

Received: 20 NOV 89

Mr. David Jones
Engineering Science Laboratory
2585 Chantilly Dr. NE
Atlanta, GA 30324

PARTIAL
REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION , SOLID OR SEMISOLID SAMPLES	SAMPLED BY
9674-3	89-11-1222 11/15/89	Client

	PN-SL-1
PARAMETER	9674-3
Pesticides in TCLP extract	
Chlordane (TCLP), ug/l	<1.0
Endrin (TCLP), ug/l	<0.20
Heptachlor (& hydroxide) (TCLP), ug/l	<0.10
Lindane (g-BHC) (TCLP), ug/l	<0.10
Methoxychlor (TCLP), ug/l	<100
Toxaphene (TCLP), ug/l	<10
Herbicides in TCLP, ug/l	<1.0
TCLP extraction volatiles ZHE	
Phases	2
% Solids	94 %
% that passes 9.5 mm sieve	100 %

Jesse L. Smith
Laboratory Director

James W. Andrews, Ph.D.
President

Jeanette Davis Long
Vice-President

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9674-3	89-11-1222 11/15/89	PN-SL-1	Client
PARAMETER		9674-3	
Volatiles in TCLP extract			
Acrylonitrile (TCLP), ug/l		<5000	
Benzene (TCLP), ug/l		<500	
Carbon disulfide (TCLP), ug/l		<500	
Carbon tetrachloride (TCLP), ug/l		<500	
Chlorobenzene (TCLP), ug/l		<500	
Chloroform (TCLP), ug/l		<500	
1,2-Dichloroethane (TCLP), ug/l		<500	
1,1-Dichloroethylene (TCLP), ug/l		<500	
Isobutanol (TCLP), ug/l		<10000	
Methylene Chloride (TCLP), ug/l		<500	
Methyl ethyl ketone (TCLP), ug/l		<1000	
Pyridine (TCLP), ug/l		<100000	
1,1,1,2-Tetrachloroethane (TCLP), ug/l		<500	
1,1,2,2-Tetrachloroethane (TCLP), ug/l		<500	
Tetrachloroethylene (TCLP), ug/l		<500	
Toluene (TCLP), ug/l		<500	
1,1,1-Trichloroethane (TCLP), ug/l		<500	
1,1,2-Trichloroethane (TCLP), ug/l		<500	
Trichloroethylene (TCLP), ug/l		<500	
Vinyl chloride (TCLP), ug/l		<100	
Styrene, ug/l		760	
Ethylbenzene, ug/l		13000	

REFERENCE: EPA SW-846

Jesse L. Smith

Jesse L. Smith

PART B
QUESTION NOS. 1 & 2

[Butadiene Plant Site, et al. 50%]

GENERAL WARRANTY DEED

THE STATE OF TEXAS)
)
COUNTY OF JEFFERSON)

ss: KNOW ALL MEN BY THESE PRESENTS:

THAT, THE B.F. GOODRICH COMPANY, a New York corporation, having a place of business in Jefferson County, Texas (hereinafter called "GRANTOR"), for a valuable consideration to it in hand paid by TEXACO BUTADIENE COMPANY, a Delaware corporation, having a place of business in Jefferson County, Texas (hereinafter called "GRANTEE"), the receipt and sufficiency of which is hereby acknowledged, has GRANTED, SOLD and CONVEYED, and by these presents does GRANT, SELL and CONVEY unto GRANTEE all of its undivided fifty percent (50%) interest in and to the following described real property, together with all buildings, structures, facilities, plants and other improvements thereon, and all easements and rights of way appurtenant thereto, to-wit:

BUTADIENE PLANT SITE

Parcel No. 8A

A tract of land designated as "Parcel No. 8, Part A" on Sheets 1, 1-A, 2, 3, 4, 5, 6, 8, and 9 of a Drawing prepared by C. A. Thompson, Engineers & Surveyors dated as follows: Sheet 1, 9/1/80; Sheet 1-A, 9/16/80; Sheet 2, 9/28/80;

Sheet 3, 9/25/80; Sheet 4, 9/20/80; Sheet 5, 9/20/80; Sheet 6, 9/26/80; Sheet 8, 9/17/80; Sheet 9, 9/28/80 and the following Sheets were revised by H. E. Fischer, Registered Public Surveyor, No. 1432, of the firm of Deevy & Shannon on December 22, 1980: Sheets 1, 1-A, 6, 9; said tract being located in Jefferson County, Texas and part of and out of Division No. 3 and Division No. 4 of the T. F. McKinney League, Abstract 41 and more fully described as follows:

BEGINNING at a point which is located 1820.55 feet N 8° 16" 22" E and 110.00 feet N 81° 43' 38" W from the southeast corner of the T. F. McKinney League, Division 3, said point being the Place of Beginning for the tract described herein;

THENCE N 8° 16' 22" E 10,697.79 feet to a point for a corner;

THENCE N 5° 37' 38" W 62.44 feet to a concrete monument for a corner;

THENCE continuing N 5° 37' 38" W 209.85 feet to a point for a corner, said point being a galvanized steel corner post for a chain link fence;

THENCE S 8° 13' 26" W 246.45 feet to a galvanized steel fence corner post for a corner;

THENCE N 81° 42' 07" W 293.76 feet to a galvanized steel fence corner post for a corner;

THENCE N 8° 18' 20" E 549.44 feet to a point for a corner;

THENCE N 80° 39' 28" W 74.84 feet to a point for a corner;

THENCE N 7° 41' 19" E 383.41 feet to a point for a corner, said point being at the intersection with a curve to the left;

THENCE along said curve left whose long chord is 417.86 feet and bears N 65° 04' 25" W and has a radius of 732.05 feet, to a concrete monument for a corner;

THENCE N 81° 41' 38" W 600.7 feet to a concrete monument for a corner, said point being at the intersection of a curve to the right;

THENCE along said curve right whose long chord is 301.46 feet and bears N 70° 45' 21" W and a radius of 794.38 feet to a point for a corner, said point being in the west line of Division No. 3 T. F. McKinney League;

THENCE S 8° 16' 22" W 938.73 feet to a concrete monument for a corner;

THENCE S 81° 43' 38" E 40.00 feet to a point for a corner;

THENCE S 8° 16' 22" W 589.38 feet to a concrete monument for a corner;

*THENCE N 81° 43' 38" W 18.00 feet to a point for a corner;

*THENCE S 8° 16' 22" W 443.18 feet to a point for a corner;

*THENCE N 81° 43' 38" W 460.00 feet to a point for a corner;

*THENCE N 8° 16' 22" E 313.18 feet to a point for a corner;

*THENCE N 81° 43' 38" W 502.00 feet to a point for a corner;

*THENCE S 8° 16' 22" W 1796.87 feet to a concrete monument for a corner;

THENCE S 81° 43' 38" E 95.00 feet to a point for a corner;

THENCE N 8° 16' 22" E 200.00 feet to a point for a corner;

THENCE S 81° 43' 38" E 355.50 feet to a point for a corner;

---

* Based on Deevy & Shannon Survey, Drawing No. 8045-1, dated 12/22/80.

THENCE S 8° 16' 22" W 200.00 feet to a point for a corner;

THENCE S 81° 43' 38" E 49.00 feet to a point for a corner;

THENCE N 8° 16' 22" E 100.00 feet to a point for a corner;

THENCE S 81° 43' 38" E 100.00 feet to a point for a corner;

THENCE S 8° 16' 22" W 100.00 feet to a point for a corner;

THENCE S 81° 43' 38" E 300.50 feet to a point for a corner;

THENCE S 64° 22' 23" E 41.91 feet to a monument for a corner, said point being in the north line of Texas Highway FM-366;

THENCE S 8° 16' 22" W 288.83 feet to a concrete monument for a corner; said point being in the intersection of Division No. 3 and Division No. 4 of the T. F. McKinney League;

THENCE N 81° 43' 38" W 940.00 feet to a point for a corner;

THENCE S 8° 16' 22" W 1967.22 feet to a point for a corner;

THENCE S 82° 35' 38" E 940.10 feet to a concrete monument for a corner, said point being at the intersection of Division 3 and Division 4, T. F. McKinney League;

THENCE S 8° 16' 22" W 6117.93 feet to a point for a corner, said point being in the west line of Division No. 3 and east line of Division 4, T. F. McKinney League;

THENCE S 81° 43' 38" E 1734.44 feet to the Place of Beginning and containing 534.31 acres more or less, with the following exceptions which are not conveyed herein:

WASTE WATER TREATMENT PLANT - PARCEL NO. 6 as described on the C.A. Thompson Survey	39.6045 Acres
Easement to Jefferson County (15.0 ft x 10,697.79 ft.)	3.6838 Acres
Main Street Easement (40.0 x 938.73 ft.)	0.8620 Acres
Park Road Easement (95.0 x 1796.87 ft.)	3.9188 Acres
Drainage District No. 7 Easement (35.45 x 1967.22 ft.)	1.5987 Acres
Drainage District No. 7 Easement	0.9418 Acres
Houston Pipeline Co. Easement	0.3402 Acres
Exxon Gas System, Inc. Easement	0.2732 Acres
Texas Highway FM-366 Easement	3.7500 Acres
TOTAL EXCEPTIONS	54.9730 Acres
TOTAL USEABLE ACREAGE	479.34 Acres

AND:

Parcel No. 8B

A tract of land designated as "Parcel No. 8, Part B" on Sheet 6 of Drawing prepared by C. A. Thompson, Engineers & Surveyors under date of 9/26/80 as revised by H. E. Fischer, Registered Public Surveyor, No. 1432, of the firm of Deevy & Shannon on December 22, 1980, said tract being located in Jefferson

County, Texas and part of and out of Division No. 3 and Division No. 4 of the T. F. McKinney League, Abstract 41 and more fully described as follows:

BEGINNING at a point which is located N 81° 43' 38" W 110.00 feet and N 8° 16' 22" E 12,726.47 feet from the southeast corner of Division No. 3, T. F. McKinney League, said point being the PLACE OF BEGINNING:

THENCE N 5° 37' 38" W 329.06 feet to a concrete monument for a corner, said point being at the intersection of a curve to the left;

THENCE along said curve to the left whose long chord is 36.79 feet and N 7° 02' 11" W and a radius of 782.05 feet to a concrete monument for a corner;

THENCE S 81° 43' 38" E 88.72 feet to a point for a curve;

THENCE S 8° 16' 22" W 354.91 feet to the place of BEGINNING, containing 0.3578 acres more or less, excepting a 15 foot wide strip and 354.91 feet long (an easement to Jefferson County) containing 0.1118 acres more or less, leaving a total of 0.2465 acres useable land.

AND:

Parcel No. 9 (RIVER PUMP HOUSE)

A tract of land designated as "River Pump House - Parcel No. 9" on Sheet 7 of Drawing prepared by C. A. Thompson, Engineers and Surveyors under date of 9/21/80, said tract also being a part of Tract 3 of Group A described in Deed dated April 19, 1955 to Goodrich-Gulf, Inc. from RUBBER PRODUCING DISPOSAL COMMISSION, as recorded in the Deed Records, Jefferson County, Texas (Vol. 975, page 197), and being located in Jefferson County and part of and out of the Joseph Grigsby League, Abstract 27, and more fully described as follows:

BEGINNING at a concrete monument which is N 8° 16' 22" E 16,774.06 feet and N 81° 43' 38" W 1,320.95 feet from the southeast corner of Division 3, T. F. McKinney League for the PLACE OF BEGINNING;

THENCE N 8° 16' 22" E 828.11 feet to a point of intersection with the Mean Low Gulf Level on the south side of the Neches River for a corner;

THENCE in a southeasterly direction following the meanders of the Mean Low Gulf Level on the south side of the Neches River S 66° 50' 39" E 310.41 feet to a point for a corner;

THENCE S 8° 16' 22" W 748.38 feet to a point for a corner, said point being in the north line of Grigsby Dr. formerly Avenue "A";

THENCE N 81° 43' 38" W 300.00 feet along the north line of Grigsby Dr. to the PLACE OF BEGINNING; containing 5.4286 acres more or less.

AND:

TWENTY-FOOT STRIP ON SOUTH END

Parcel No. 10A

A twenty-foot wide strip of land designated as Parcel No. 10A on Sheet 1 of Drawing prepared by C. A. Thompson, Engineers & Surveyors under date of 9/1/80 as revised by H. E. Fischer, Registered Public Surveyor, No. 1432, of the firm of Deevy & Shannon on December 22, 1980, said land being part of and out of Division No. 3 of the T. F. McKinney League, Abstract No. 41, in Jefferson County, Texas being more particularly described as follows:

BEGINNING at the Southeast corner of Division No. 3 of the T. F. McKinney League, thence N 81° 43' 38" W along the south line of Division No. 3 a distance of 429.72 feet to a monument for the PLACE OF BEGINNING (said monument being located at the Southwest corner of Stine Road);

THENCE N 39° 02' 22" E 300.90 feet to a point in the south right-of-way of State Highway 347 for a corner;

THENCE along said Highway right-of-way N 50° 57' 38" W 20 feet to a point for a corner;

THENCE S 39° 02' 22" W 312.80 feet to a point in the south line of said Division No. 3 for a corner;

THENCE S 81° 43' 38" E 23.28 feet to the PLACE OF BEGINNING, containing 0.1386 acres, more or less.

AND:

THIRTY-FOOT STRIP ON SOUTH END

A tract of land designated as "Parcel No. 10, Part B," and shown on Sheet 1 of Drawing prepared by C. A. Thompson, Engineers & Surveyors, dated September 1, 1980 as revised by H. E. Fischer, Registered Public Surveyor, No. 1432, of the firm of Deevy & Shannon, on December 22, 1980, said tract being out of and part of Division No. 3 of the T. F. McKinney League, Abstract No. 41, located in Jefferson County, Texas, and more particularly described as follows:

BEGINNING at a concrete monument which is located 878.93 feet N 8° 16' 22" E and 125 feet N 81° 43' 38" W from the southeast corner of the T. F. McKinney League, Division 3, and said point being the Place of Beginning of the tract described herein;

THENCE N 81° 43' 38" W 30.00 feet to a concrete monument for a corner, said point being the northeast corner of Texas Highway Department land for improvements to Texas Highway No. 347;

THENCE S 8° 16' 22" W 358.82 feet to a point for a corner;

THENCE S 39° 02' 22" W 226.54 feet to a point in the north line of Highway No. 347 for a corner;

THENCE S 50° 57' 38" E along the north line of Highway No. 347 30.00 feet to a point for a corner;

THENCE N 39° 02' 22" E 234.79 feet to a concrete monument for a corner;

THENCE N 8° 16' 22" E 367.08 feet to the Place of Beginning, and containing 0.41 acres more or less.

OUTFALL CANAL

Parcel 11A

A tract of land being part of a tract of land designated as "The Outfall Canal - Parcel 11A," on sheet 10 of Drawing prepared by C. A. Thompson, Engineers and Surveyors under date of 9/22/80, said tract belonging to The Texas Company and being out of and part of the T. F. McKinney League and conveyed as an easement for said outfall canal, and more fully described as follows:

BEGINNING at the southeast corner of Division 3, T. F. McKinney League, Abstract 41, located in Jefferson County, Texas N 8° 16' 22" E 10,513.01 feet and on the east line of Division 3 for the PLACE OF BEGINNING.

THENCE S 82° 09' 38" E 98.04 feet to a point in the west right-of-way line of the Kansas City Southern Railroad, and continuing on this same tangent another 62.32 feet to a point in the east right-of-way line of said railroad; THENCE continuing on this same tangent another 138.22 feet to a point for a corner (a total distance of 298.58 feet);

THENCE S 66° 29' 08" E 325.89 feet to a point for a corner;

THENCE S 82° 09' 38" E 2399.06 feet to a point for a corner, said point being a 2" iron pipe in the west right-of-way line of the Old Port Neches - Groves Road;

THENCE S 7° 49' 34" W 100.00 feet to a 2" iron pipe for a corner;

THENCE N 82° 09" 38" W 2412.90 feet to a point for a corner;

THENCE N 66° 29' 08" W 72.36 feet to a point for a corner;

THENCE N 82° 09' 38" W 182.82 feet to a point in the east right-of-way line of the above mentioned railroad; THENCE on this same tangent another 86.80 feet to a point in the west right-of-way line of said railroad; THENCE another 260.52 feet to a concrete monument for a corner; a total distance of 530.14 feet.

THENCE N 8° 16' 22" E 168.51 feet to a concrete monument the PLACE OF BEGINNING, containing 7.58339 acres more or less, excepting a KCS Railroad right-of-way of 0.288 acres more or less, leaving 7.29539 acres.

AND:

Parcel No. 11B

A tract of land designated as "The Outfall Canal - Parcel 11B," on sheet 10 of drawings prepared by C. A. Thompson, Engineers and Surveyors under date of 9/22/80, said land being out of and part of the T. F. McKinney League and the Joseph Grigsby League, Abstracts 41 and 27 respectively, located in Jefferson County, Texas and said land being the same land of the old Federal Facilities Corporation, said tract being part of Tract 4 of Group A described in Deed dated April 19, 1955 to GOODRICH-GULF CHEMICALS, INC. from RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION, as recorded in the Deed Records, Jefferson County, Texas (vol. 975, page 197), and being located in Jefferson County, Texas and more particularly described as follows:

BEGINNING at a 2" iron pipe in the east line of the Old Port Neches-Groves Road for the PLACE OF BEGINNING.

THENCE S 82° 12' 26" E 1017.7 feet to a point for a corner, said point being the east line of the T.F. McKinney League, Abstract 41 and the west line of the Joseph Grigsby League, Abstract 27;

THENCE N 7° 43' 34" E 28.4 feet to a concrete monument for a corner;

THENCE S 82° 15' 26" E 597.2 feet to a concrete monument for a corner; said monument being in the west line of Orchard Avenue;

THENCE S 7° 44' 34" W 218.9 feet to a 2" iron pipe for a corner;

THENCE N 82° 15' 26" W 467.23 feet to a concrete monument for a corner;

THENCE N 47° 29' 26" W 158.13 feet to a monument for a corner;

THENCE S 7° 42' 34" W 25.47 feet to a concrete monument for a corner;

THENCE N 82° 12" 26" W 1017.93 feet to a concrete monument for a corner;

THENCE N 7° 49' 34" E 125.8 feet to the PLACE OF BEGINNING, Containing 5.80574 acres more or less.

AND:

Parcel 11C

A tract of land designated as "The Outfall Canal - Parcel 11C," on sheet 11 of drawing prepared by C.A. Thompson, Engineers and Surveyors under date of 10/27/80, said tract being out of and part of the old Federal Facilities Corporation tract and in and part of the Joseph Grigsby League, Abstract No. 27, located in Jefferson County, Texas, said tract being part of Tract 5 of Group A described in Deed dated April 19, 1955 to GOODRICH-GULF CHEMICALS, INC. from RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION, as recorded

in the Deed Records, Jefferson County, Texas (vol. 975, page 197), and being located in Jefferson County, Texas, and more particularly described as follows:

BEGINNING at the southwest corner of Lot No. 26, Neches Gardens Subdivision, said point being a concrete monument located in the eastern right-of-way line of Orchard Avenue;

THENCE S 7° 43' 34" W 52.69 feet to a concrete mounument for the PLACE OF BEGINNING:

THENCE S 78° 38' 28" E 606.69 feet to a point for a corner;

THENCE S 57° 04' 16" E 105.31 feet to a point for a corner;

THENCE S 39° 04" 31" E 1563.39 feet to a concrete monument for a corner; said point being in the centerline of an old abandoned road;

THENCE S 7° 44' 34" W 217.93 feet to a point near a fence post for a corner, said point also being in the center-line of an old abandoned road;

THENCE N 39° 04' 31" W 1693.84 feet to a concrete monument for a corner;

THENCE N 54° 45' 44" W 36.11 feet to a concrete monument for a corner;

THENCE N 77° 45' 55" W 575.34 feet to a point in the east line of Orchard Avenue for a corner, said point being near a pipeline;

THENCE N 7° 43' 34" E 150.00 feet to the PLACE OF BEGINNING, Containing 8.2861 acres more or less.

AND:

Parcel 11D

A tract of land designated as "The Outfall Canal - Parcel 11D," on sheet 12 of Drawing prepared by C. A. Thompson, Engineers and Surveyors under the date of 9/24/80, said land being out of and part of the Joseph Grigsby League Abstract No. 27, located in Jefferson County, Texas, said tract being part of Tract 5 of Group A described in Deed dated April 19, 1955 to GOODRICH-GULF CHEMICALS, INC. from RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION, as recorded in the Deed Records, Jefferson County, Texas (vol. 975, page 197), and more particularly described as follows:

BEGINNING at a concrete monument which is located S 7° 44' 34" W 919.3 feet from the northeast corner of the Landfill, Parcel 7A, said point being in the centerline of an old abandoned road and said point being the PLACE OF BEGINNING for this tract;

THENCE S 65° 05' 26" E 972.86 feet to a point for a corner;

THENCE N 7° 37' 34" E 41.90 feet to a point for a corner;

THENCE S 72° 09' 26" E 484.28 feet to a concrete monument for a corner; said point being in the west line of Grossie Road (now closed);

THENCE S 39° 14' 34" W 322.3 feet to a concrete monument for a corner;

THENCE N 72° 09' 26" W 312.60 feet to a point for a corner;

THENCE N 7° 37' 34" E 53.5 feet to a point for a corner;

THENCE N 65° 05' 26" W 973.3 feet to a concrete monument for a corner;

THENCE N 7° 44' 34" E 209.30 feet to the PLACE OF BEGINNING, containing 7.2138 acres, more or less.

AND:

Parcel 11E

A tract of land designated as "The Outfall Canal - Parcel 11E," on Sheet 12 of Drawing prepared by C. A. Thompson, Engineers and Surveyors under date of 9/24/80, said tract being out of and part of the Joseph Grigsby League Abstract 27 and the Burr and Caswell Survey No. 3, Abstract No. 393, located in Jefferson County, Texas, said tract being part of Tract 7 of Group A described in Deed dated April 19, 1955 to GOODRICH-GULF CHEMICALS, INC. from RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION, as recorded in the Deed Records, Jefferson County, Texas (vol. 975, page 197), and being located in Jefferson County, Texas, and more particularly described as follows:

BEGINNING at a point which is located in the northwesterly line of Lot 6, Block 8, Range B of the Port Arthur Land Co. Survey and S 39° 14' 34" W along said northwesterly line of Lot 6, Block 8, Range B a distance of 138.7 feet from the northwest corner of said Lot 6, Block 8, Range B, said point being in the easterly line of a formerly dedicated 40 foot wide road commonly known as Grossie Road (now closed) for the PLACE OF BEGINNING;

THENCE N 84° 20' 54" E 196.8 feet to an iron rod for a corner;

THENCE N 50° 45' 26" W 26.6 feet to an iron rod for a corner;

THENCE S 84° 24' 06" E 801.4 feet to an iron rod for a corner;

THENCE S 50° 45' 26" E 74.85 feet to an iron rod for a corner;

THENCE N 52° 08' 54" E 847.38 feet to an iron rod for a corner; said point being in the southwesterly right-of-way line of a county road known as the Port Neches-Atlantic Road;

THENCE S 50° 45' 06" E 102.6 feet to an iron rod for a corner;

THENCE S 52° 08' 54" W 995.23 feet to a point for a corner;

THENCE N 84° 24' 06" W 541.26 feet to a point for a corner;

THENCE N 50° 45' 26" W 51.03 feet to an iron rod for a corner;

THENCE S 84° 20' 54" W 596.81 feet to an iron rod for a corner;

THENCE N 39° 14' 34" E 282.32 feet to the PLACE OF BEGINNING, containing 7.1433 acres more or less.

AND:

Parcel 11F

A tract of land designated as "The Outfall Canal - Parcel 11F," on sheet 12 of Drawing prepared by C. A. Thompson, Engineers and Surveyors under date of 9/24/80, said land being a part of the Federal Facilities Corporation land, out of the Emma Beaumont and Grinnell-Texas Company lands out of the Burr & Caswell Survey Number 3, Abstract No. 393, County of Jefferson, State of Texas, (said tract not traversed), said tract being part of Tract 8 of Group A described in Deed dated April 19, 1955 to GOODRICH-GULF CHEMICALS, INC. from RUBBER PRODUCING FACILITIES DISPOSAL COMMISSION, as recorded in the Deed Records, Jefferson County, Texas (vol. 975, page 197), and being located in Jefferson County, Texas, and being described more particularly as follows:

BEGINNING at a point which is located by commencing at a point on the centerline of the Port Neches-Atlantic County Road, said point being the most easterly corner of

Lot 8, Block 8, Range B and the most southerly corner of Lot 5, Block 8, Range A of the Port Arthur Land Company Survey;

THENCE at a right angle to the centerline of said county road a distance of 50.0 feet to the northeasterly right-of-way line of said Port Neches-Atlantic County Road;

THENCE S 50° 45' 06" E along the northeasterly right-of-way line of said county road a distance of 10.9 feet intersecting the northwesterly line of the Emma Beaumont tract and for a total distance of 63.15 feet to the said point of beginning of this tract;

THENCE N 45° 51' 14" E at 1,035 feet intersect a meander line between the Emma Beaumont tract and the Grinnell-Texas Company tract and for a total distance of 7.072.00 feet to a point in the Neches River for a corner;

THENCE S 44° 08' 46" E, for a distance of 100 feet to a point for a corner (said point being located in the Neches River);

THENCE S 45° 51' 14" W, at 5,980 feet intersect a meander line between the Grinnell-Texas Company tract and the Emma Beaumont tract and for a total distance of 7,060 feet to

a point of intersection with the northeasterly right-of-way line of the said Port Neches-Atlantic County road;

THENCE N 50° 45' 06" W a distance of 100.67 feet along the northeasterly right-of-way line of the aforesaid Port Neches-Atlantic County Road to the point of beginning, and containing 16.22 acres, more or less.

This conveyance is made subject to all validly existing easements, rights of way, licenses, restrictive covenants and reservations of record as of the date hereof pertaining to the fifty-percent undivided interest in the above-described property conveyed herein.

TO HAVE AND TO HOLD the fifty-percent undivided interest in the above-described property, together with all and singular the rights and appurtenances thereto in anywise belonging, unto GRANTEE, its successors and assigns forever. And GRANTOR does hereby bind itself, its successors and assigns, to WARRANT AND FOREVER DEFEND all and singular said undivided interest in said property unto GRANTEE, its successors and assigns, against every person whomsoever lawfully claiming or to claim the same, or any part thereof.

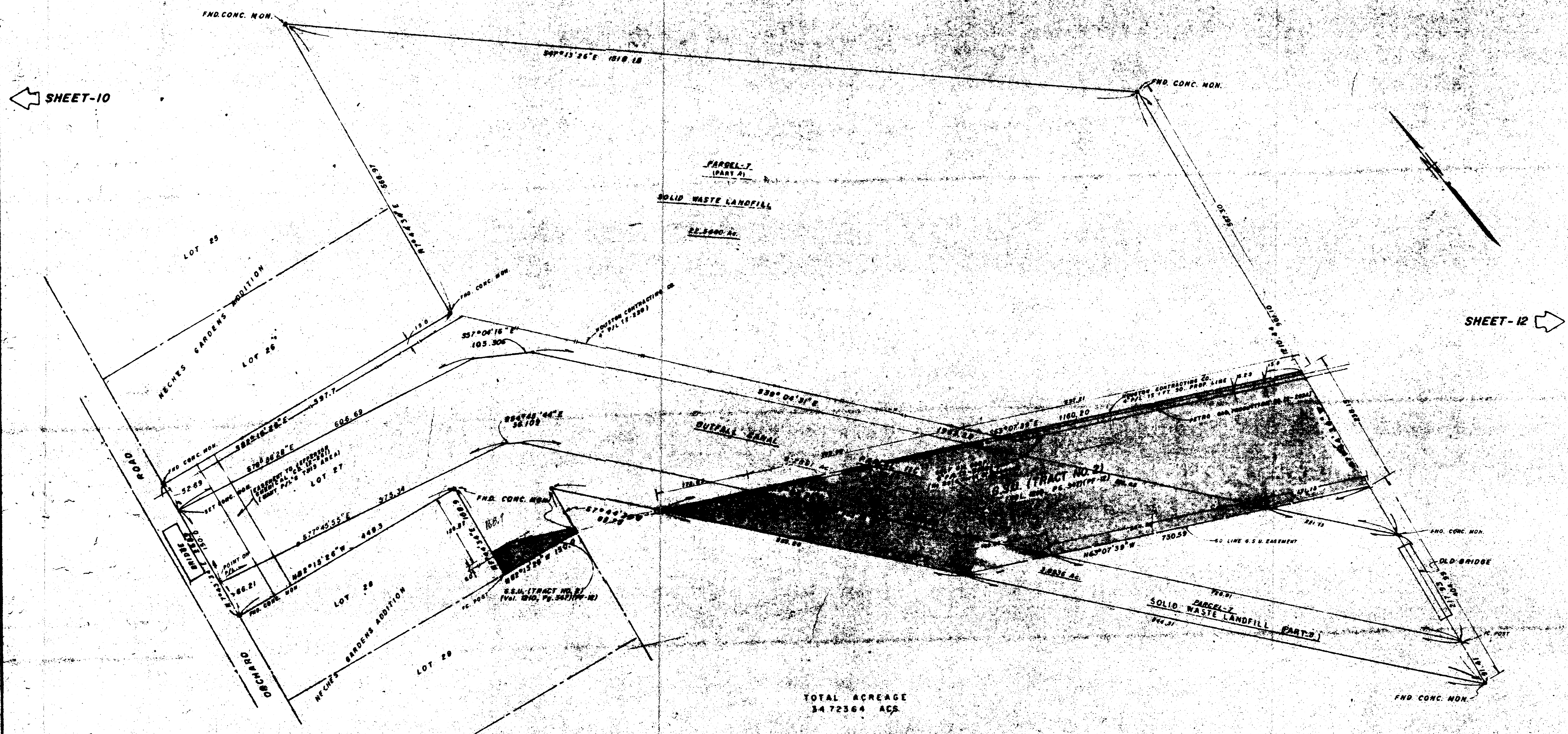
Executed this 29th day of December, 1980.

THE B.F. GOODRICH COMPANY

By Burt A. DiLiddo TEL


SHEET-10
TEXACO
PT. OF BEGINNING - S.E. COR. DIV. 3
105+13.01 N
00+00 E
S82° 09' 38" E
298.58
98.04
62.32
138.22
S86° 29' 08" E 323.88
R=789.49
ARC 234.14
R=739.49
ARC 251.92
(50.0 R.O.W.)
168.5
N8° 16' 22" E
260.52
182.82
530.14
N82° 09' 38" W
N66° 29' 08" W
72.36
7.595 Ac
-0.288
7.307 Ac
100.0
80.0
S82° 09' 38" E 2399.06
NECHES BUTANE PRODUCTS CO. OUTFALL CANAL
PARCEL-11A
TEXAS CO. LAND
(Easement Only)
N82° 09' 38" W 2412.90
S 7° 48' ... W
100.0
FND 2" I.P.
11B
LOWER NECHES VALLEY AUTHORITY (FRESH WATER CANAL)
THE TEXAS CO. 16.0 STRIP
SHEET 5
TEXAS HIGHWAY 136
PROPERTY LN.
K.C.S. R.R. SPUR TO PORT NECHES
EAST BOUNDARY LINE
DIV 3 T.F. McKINNEY LEAGUE
A-41
WEST LINE NECHES GARDENS ADD. AND DIV. LINE
BETWEEN JOS. GRIGSBY & T.F. McKINNY LEAGUE
LOT 13
ADDITION
FND. CONC. MON.
S82° 15' 26" E 587.2
[illegible] 7° 42' 34" E
29.4
GROVES RD.
FND. 2" I.P.
FND. 2" I.P.
S82° 12' 26" E 1017.7
OUT FALL CANAL
LOT 14
50.0
BRIDGE
11A
N [illegible] 49' 34" E 125.8
BRIDGE
PARCEL-11B
5.888 Ac.
S7° 42' 34" W
25.47
SHEET-11
(11C)
N82° 12' 26" W 1017.93
N47° 29' 26" W
158.13
GARDENS
N82° 15' 26" W 467.23
FND. 2" I.P.
LOWER NECHES VALLEY - FRESH WATER CANAL (80.0 R.O.W.)
OLD PORT NECHES
ORCHARD AVE.
LOT 15
NECHES
T. F. McKINNY LEAGUE
JOS. GRIGSBY LEAGUE
STATE OF TEXAS
C. A. THOMPSON
457
PUBLIC SURVEYOR
I, C.A. Thompson, do hereby certify this map truly and correctly represents an actual survey made on the ground.
Witness my hand and seal this the 22nd day of September 19 80
C. A. Thompson
REGISTERED PUBLIC SURVEYOR NO. 457
C. A. THOMPSON
ENGINEERS & SURVEYORS
HOUSTON, TEXAS
SCALE 1" = 100'
APPROVED BY H. G. O'KEEFE
DRAWN BY H.G.O.
DATE 9-22-80
TEXAS-U.S. CHEMICAL COMPANY-
NECHES BUTANE COMPANY PROPERTY
JEFFERSON COUNTY, TEXAS
DRAWING NUMBER
FINAL PLAT (PROPERTY & EASEMENTS)
Sheet #10
DIETZGEN MASTER FORM 185M5

SHEET-11


SHEET-10
SHEET-12
FND. CONC. MON.
S81°13'26"E 1818.18
N78°43'34"E 566.97
567.30
PARCEL-7
(PART A)
SOLID WASTE LANDFILL
22.5400 Ac.
LOT 25
LOT 26
NECHES GARDENS ADDITION
LOT 27
LOT 28
LOT 29
ROAD
ORCHARD
BRIDGE
HOUSTON CONTRACTING CO.
S37°04'16"E
105.306
S39°04'31"E
OUTFALL CANAL
597.7
606.69
S70°56'28"E
EASEMENT TO JEFFERSON CHEMICAL CO.
52.69
SET CONC. MON.
S77°45'55"E
375.34
N82°15'26"W 448.3
POINT ON P/L
56.21
150.0
FND. CONC. MON.
168.9
G.S.U.-(TRACT NO. 2)
(Vol. 1210, Pg. 367)(PP-12)
FC. POST
1160.20
S63°07'39"E
G.S.U. (TRACT NO. 2)
N63°07'39"W
730.59
50 LINE G.S.U. EASEMENT
2.0836 Ac.
PARCEL-7
SOLID WASTE LANDFILL
PART-B
221.73
FND. CONC. MON.
OLD BRIDGE
TOTAL ACREAGE
34.72364 ACS.

I, C.A. Thompson, do hereby certify this map truly and correctly represents an actual survey made on the ground.

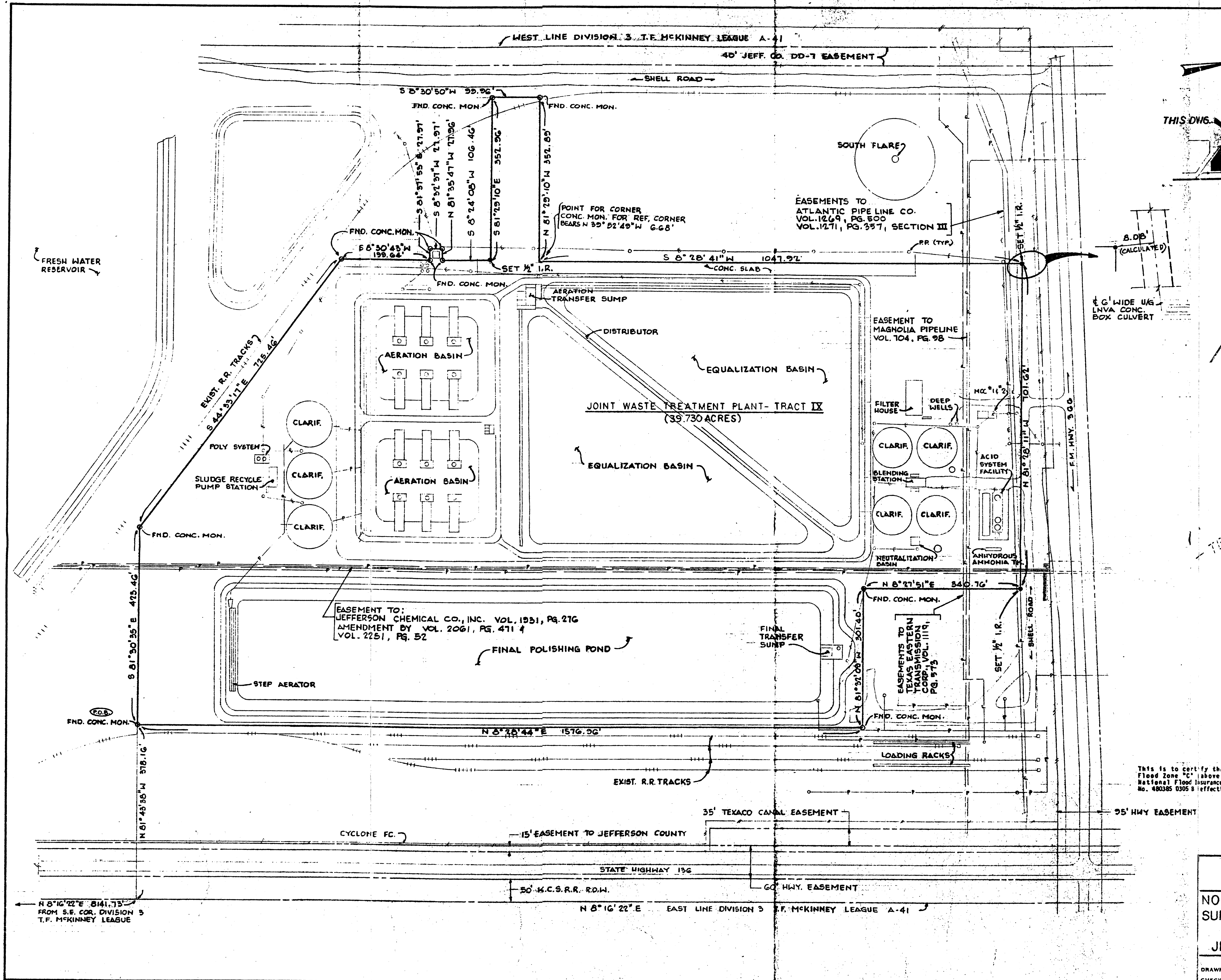
Witness my hand and seal this the 28th day of October, 19 80

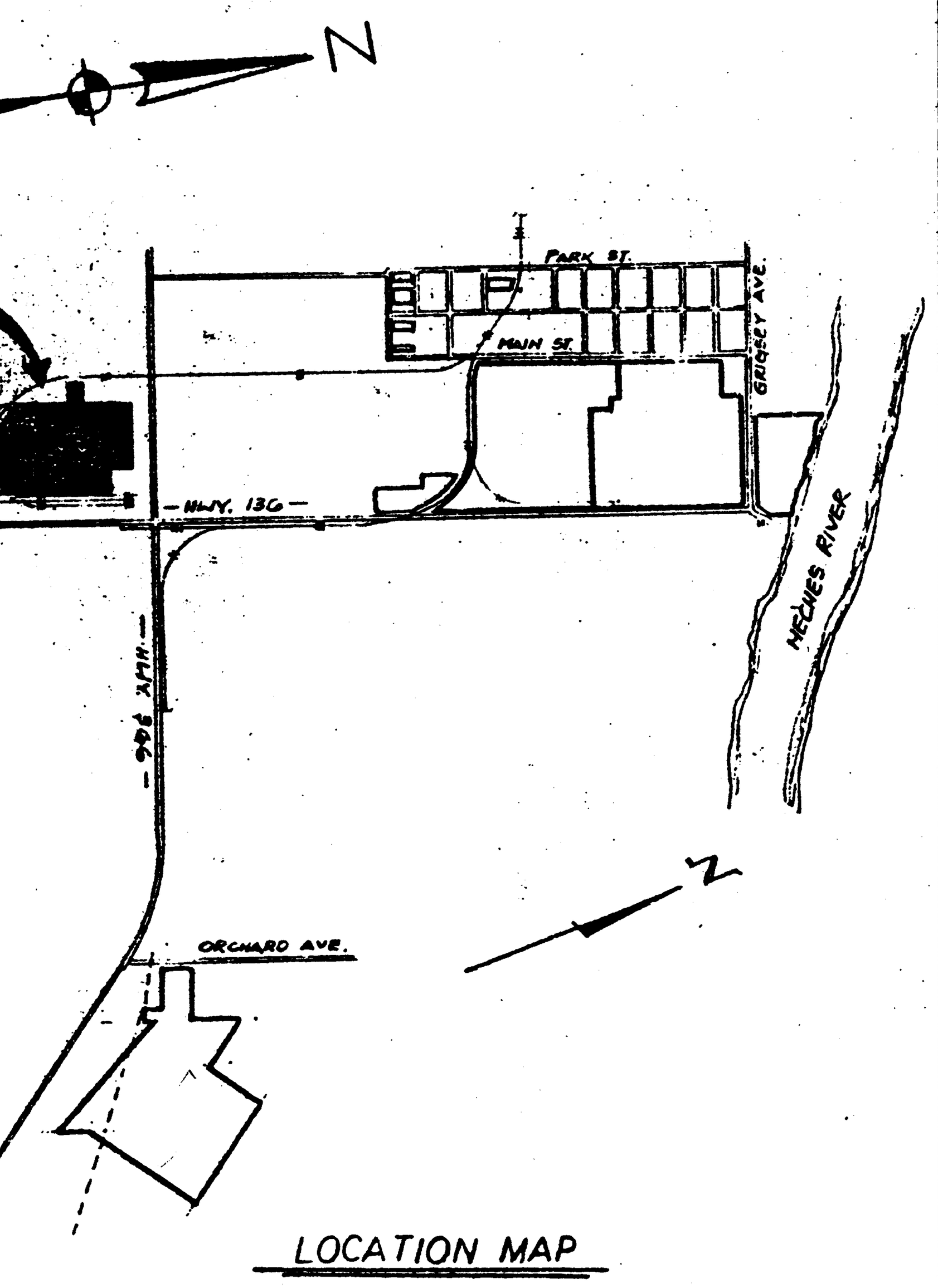
C. A. Thompson
REGISTERED PUBLIC SURVEYOR NO. 457

C. A. THOMPSON ENGINEERS & SURVEYORS		
HOUSTON,		TEXAS
SCALE 1" = 100'	APPROVED BY	DRAWN BY
DATE 10-27-80	H. G. O KEEFE	H.G.O.
TEXAS-U.S. CHEMICAL COMPANY- NECHES BUTANE COMPANY PROPERTY		
JEFFERSON COUNTY,		TEXAS
FINAL PLAT (PROPERY & EASEMENTS)		DRAWING NUMBER

Group A; Tract 6: Rubber Producing Facilities Disposal Commission to Goodrich-Gulf – ½ interest
Recorded May 17, 1955
Vol. 975, p 107 et seq


SHEET-12
LOT 1
Wm. GENTZ ESTATE
A. W. GENTZ
GROSSIE SUBDIVISION
11C(2)
N7°44'34"E 209.30
972.88
N7°37'34"E
41.90
S72°09'26"E
PARCEL 11D
N65° 05' 26"W
973.3
7.214 Ac.
HOUSTON P/L CO.
LOT 1
Wm. GENTZ ESTATE
HURRICANE CONTROL EASEMENT IN THIS AREA WILL NOT CLOSE NOR PLOT (2-280)
LOT 2
Wm. GENTZ ESTATE
A. W. GENTZ
N7°37'34"E
53.5
N72° 09' 26"W 312.60
GROSSIE SUBDIVISION
GROSSIE
ROAD
(CLOSED)
11E
SHEET-11
RIVER
NECHES
BRIDGE TO RIVER NOT TRAVERSED DUE TO DEEP WATER
PARCEL 11F
APPROX.
BRIDGE
2" I.P. (DISTURBED)
STAR
LAKE
200' WIDE STRIP IN CITY LIMITS OF PORT NECHES
EMMA BEAUMONT
PARCEL-11
OUTFALL CANEL
BLK 7
FND 2" I.P.
N.W. COR. LOT 6, BLK. 8, RANGE "B" PORT ARTHUR LAND CO. SURVEY
N50°45'26"W
26.60
138.7
N71°18'05"E
73.36
11D
JEFFERSON CHEM CO. 12" P/L
PARCEL 11E
GROSSIE
S84°20'54"W
261.17
STATE OF TEXAS
C. A. THOMPSON
457
SURVEYOR
I, C.A. Thompson, do hereby certify this map truly and correctly represents an actual survey made on the ground.
Witness my hand and seal this the 24th day of September, 19 80
REGISTERED PUBLIC SURVEYOR No. 457
C. A. THOMPSON
ENGINEERS & SURVEYORS
HOUSTON
TEXAS
SCALE 1" = 100'
DATE 9-24-80
APPROVED BY
H. G. O'KEEFE
DRAWN BY
H. G. O'KEEFE
TEXAS - U S CHEMICAL COMPANY
NECHES BUTANE COMPANY PROPERTY
JEFFERSON COUNTY
TEXAS
DRAWING NUMBER
FINAL PLAT (PROPERT & EASEMENTS)
Sheet #12





LOCATION MAP

The undersigned hereby certifies to THE FIRST NATIONAL BANK OF CHICAGO, as Collateral Agent, Commonwealth Land Title Company of Dallas, and the Uniroyal Goodrich Tire Company, that, as of the date hereof, this survey correctly shows, on the basis of a field transit survey and in accordance with the current Minimum Standard Detail Requirements for Land Title Surveys jointly established and adopted by ATA and ACSM (i) a fixed and determinable position and location of the land described hereon (including the position of the point of beginning); (ii) the location of all principal improvements situated on the land; and (iii) all driveways or other cuts in the curbs along any street upon which the land abuts. Except as shown on said print of survey there are no visible easements or rights of way affecting the land or other easements or rights of way of which the undersigned has been advised or which are of record nor, except as shown, are there any building restriction or set-back lines, party walls, encroachments or overhangs of any improvements upon any easements, rights of way or adjacent land, or encroachments by improvements located on adjacent land upon the described land. The print of survey reflects boundary lines of the described land which "close" by engineering calculation. In addition, the undersigned hereby certifies that this map was made from an actual survey, and that both map and survey are correct to the best of my knowledge and belief.

H. E. Fischer, Texas RPS #1432

APPROVED: H.E. Fischer

DATE: 6-2-88

This is to certify that the tract(s) platted by this drawing are in Flood Zone "C" (above the 100 year flood plain) as defined by the National Flood Insurance Program and shown on Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83).

H. E. Fischer, Texas RPS No. 1432

STATE OF TEXAS
H. E. FISCHER
1432
REGISTERED
PUBLIC SURVEYOR

JUN 23 1988

Blueprints
Schedule
3.1(c)(i)
Back-up docs

DEEVY AND SHANNON
CONSULTING ENGINEERS
BEAUMONT, TEXAS

NORTH AMERICAN LAND SERVICES CORP.
SURVEY OF THE UNIROYAL GOODRICH
TIRE COMPANY PROPERTIES
JEFFERSON COUNTY, TEXAS SH. 1

	BY	DATE		DRAWING NO.	ISSUE
DRAWN	RW	5/20/88	JOB NO. 8826	8826-1	0
CHECKED	JLS		SCALE 1" = 100'		

LOCATION OF P.O.B. FOR VARIOUS TRACTS FROM SOUTHEAST CORNER DIVISION NO. 3 T.F. McKINNEY LEAGUE

TRACT NO.	BEARING & DISTANCE ALONG EAST LINE DIVISION NO. 3	BEARING & DISTANCE FROM EAST LINE DIVISION NO. 3
I & XIV	N 08°16'22"E 13,082.16'	N 81°43'38" W 110.00'
II	N 08°16'22"E 13,465.80'	N 81°43'38" W 231.81'
III	N 08°16'22"E 14,387.02'	N 81°43'38" W 1,250.17'
V	N 08°16'22"E 12,536.89'	N 81°43'38" W 175.58'
XII	N 08°16'22"E 14,130.84'	N 81°43'38" W 831.09'

This is to certify that the tract(s) platted by this drawing are in Flood Zone "C" (above the 100 year flood plain) as defined by the National Flood Insurance Program and shown on Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83).

H. E. Fischer, Texas RPS No. 1432

The undersigned hereby certifies to THE FIRST NATIONAL BANK OF CHICAGO, as Collateral Agent, Commonwealth Land Title Company of Dallas, and the Uniroyal Goodrich Tire Company, that, as of the date hereof, this survey correctly shows, on the basis of a field transit survey and in accordance with the current Minimum Standard Detail Requirements for Land Title Surveys jointly established and adopted by ATA and ACSM (i) a fixed and determinable position and location of the land described hereon (including the position of the point of beginning); (ii) the location of all principal improvements situated on the land; and (iii) all driveways or other cuts in the curbs along any street upon which the land abuts. Except as shown on said print of survey there are no visible easements or rights of way affecting the land or other easements or rights of way of which the undersigned has been advised or which are of record nor, except as shown, are there any building restriction or set-back lines, party walls, encroachments or overhangs of any improvements upon any easements, rights of way or adjacent land, or encroachments by improvements located on adjacent land upon the described land. The print of survey reflects boundary lines of the described land which "close" by engineering calculation. In addition, the undersigned hereby certifies that this map was made from an actual survey, and that both map and survey are correct to the best of my knowledge and belief.

H. E. Fischer, Texas RPS #1432

APPROVED: H.E. Fischer

DATE: 6-2-88

STATE OF TEXAS
H. E. FISCHER
1432
REGISTERED PUBLIC SURVEYOR

JUN 23 1988

DEEVY & SHANNON, INC.
Consulting Engineers

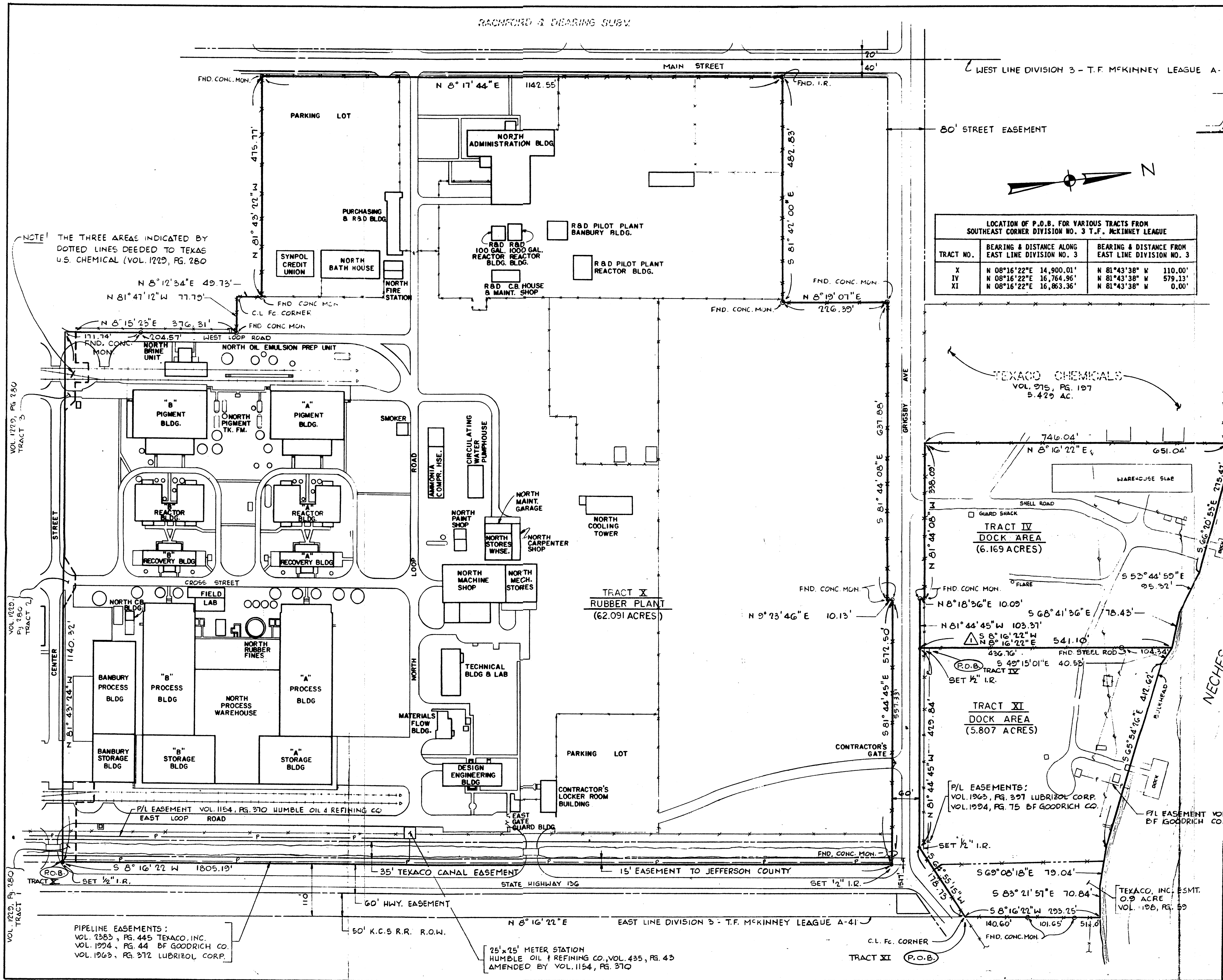
NORTH AMERICAN LAND SERVICES CORP.
SURVEY OF THE UNIROYAL GOODRICH
TIRE COMPANY PROPERTIES
JEFFERSON COUNTY, TEXAS SHT. 2

	BY	DATE		DRAWING NO.	ISSUE
DRAWN	RW	5/20/88	JOB NO. 8826	8826-2	1
CHECKED	JLS		SCALE		

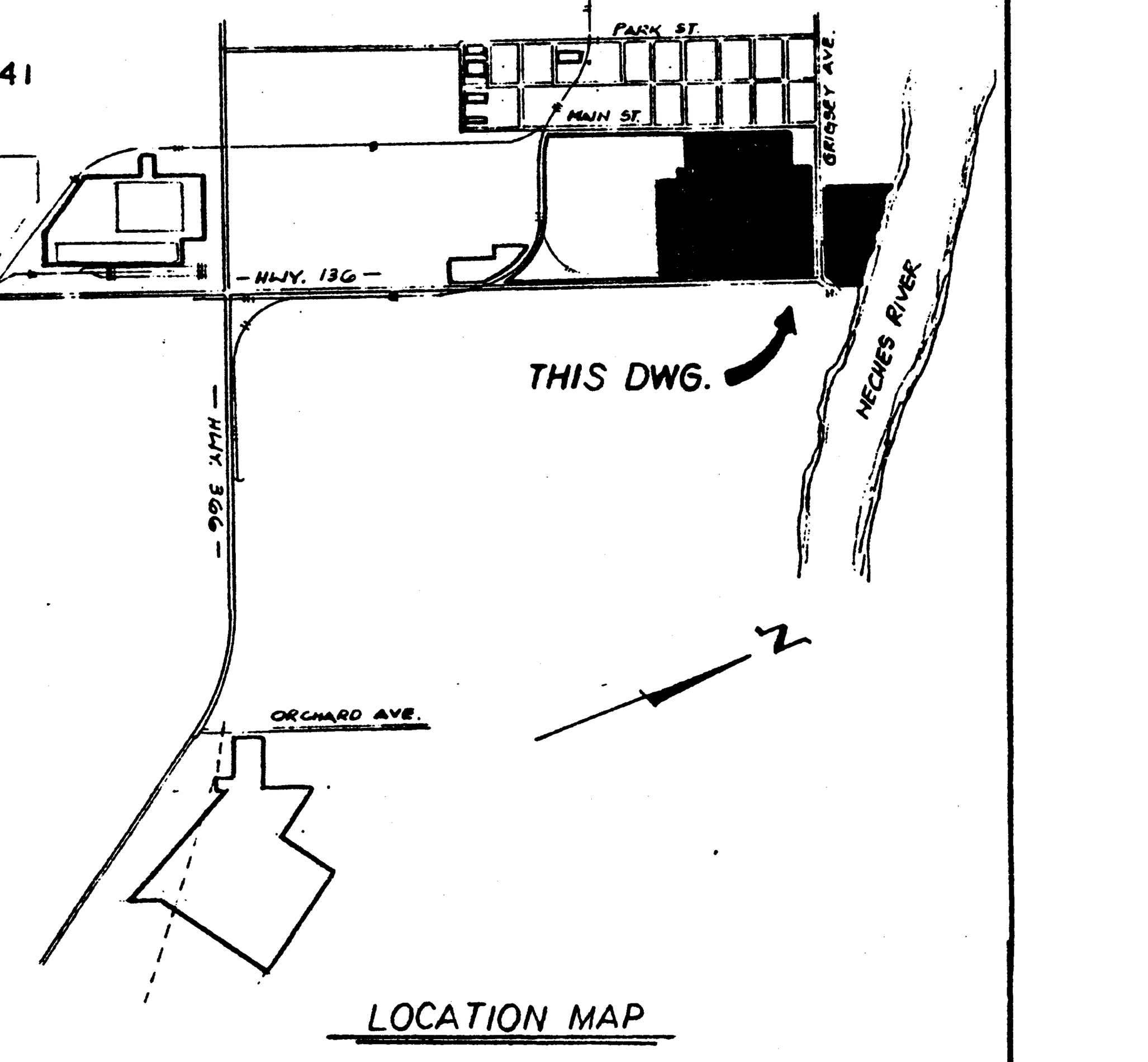
TN-1

STANPAT PRODUCTS INC. PORT WASHINGTON, N.Y.

CUT HERE GUARANTEED 1-75


RACHFORD & DEARING SUBV.
MAIN STREET
20'
40'
FND. CONC. MON.
N 8° 17' 44" E 1142.55'
FND. I.R.
PARKING LOT
NORTH ADMINISTRATION BLDG
475.77'
N 81° 43' 22" W
482.83'
S 81° 42' 00" E
80' STREET EASEMENT
PURCHASING & R&D BLDG
R&D PILOT PLANT BANBURY BLDG.
R&D 100 GAL. REACTOR BLDG.
R&D 1000 GAL. REACTOR BLDG.
R&D PILOT PLANT REACTOR BLDG.
SYNPOL CREDIT UNION
NORTH BATH HOUSE
NORTH FIRE STATION
R&D C.B. HOUSE & MAINT. SHOP
NOTE! THE THREE AREAS INDICATED BY DOTTED LINES DEEDED TO TEXAS U.S. CHEMICAL (VOL. 1229, PG. 280
N 8° 12' 34" E 49.73'
N 81° 47' 12" W 77.79'
FND CONC MON
C.L. Fc. CORNER
FND CONC MON
N 8° 19' 07" E
226.39'
FND. CONC. MON.
N 8° 15' 23" E 376.31'
171.74'
204.57'
WEST LOOP ROAD
FND. CONC. MON.
NORTH BRINE UNIT
NORTH OIL EMULSION PREP UNIT
VOL. 1229, PG. 280 TRACT 3
"B" PIGMENT BLDG.
NORTH PIGMENT TK. FM.
"A" PIGMENT BLDG.
SMOKER
AMMONIA COMPR. HSE.
CIRCULATING WATER PUMPHOUSE
"B" REACTOR BLDG.
"A" REACTOR BLDG.
"B" RECOVERY BLDG
"A" RECOVERY BLDG
NORTH PAINT SHOP
NORTH MAINT. GARAGE
NORTH STORES WHSE.
NORTH CARPENTER SHOP
NORTH COOLING TOWER
NORTH MACHINE SHOP
NORTH MECH. STORES
LOOP ROAD
STREET
CROSS STREET
NORTH CB BLDG
FIELD LAB
NORTH RUBBER FINES
VOL. 1229, Pg. 280 TRACT 2
CENTER
1140.32'
N 81° 43' 24" W
BANBURY PROCESS BLDG
"B" PROCESS BLDG
NORTH PROCESS WAREHOUSE
"A" PROCESS BLDG
BANBURY STORAGE BLDG
"B" STORAGE BLDG
"A" STORAGE BLDG
NORTH
TECHNICAL BLDG & LAB
MATERIALS FLOW BLDG.
DESIGN ENGINEERING BLDG
CONTRACTOR'S LOCKER ROOM BUILDING
EAST GATE GUARD BLDG
PARKING LOT
TRACT X
RUBBER PLANT
(62.091 ACRES)
637.88'
S 81° 44' 08" E
GRIGSBY AVE
FND. CONC. MON.
N 9° 23' 46" E 10.13'
572.50'
S 81° 44' 45" E
557.33'
CONTRACTOR'S GATE
60'
P/L EASEMENT VOL. 1154, PG. 370 HUMBLE OIL & REFINING CO
EAST LOOP ROAD
P.O.B.
TRACT X
SET ½" I.R.
S 8° 16' 22 W 1805.19'
35' TEXACO CANAL EASEMENT
15' EASEMENT TO JEFFERSON COUNTY
FND. CONC. MON.
SET ½" I.R.
STATE HIGHWAY 136
15.17'
110'
60' HWY. EASEMENT
50' K.C.S R.R. R.O.W.
N 8° 16' 22" E
EAST LINE DIVISION 3 - T.F. McKINNEY LEAGUE A-41
VOL. 1229, Pg. 280 TRACT 1
PIPELINE EASEMENTS :
VOL. 2383, PG. 445 TEXACO, INC.
VOL. 1994, PG. 44 BF GOODRICH CO.
VOL. 1963, PG. 372 LUBRIZOL CORP.
25'x25' METER STATION
HUMBLE OIL & REFINING CO., VOL. 435, PG. 43
AMENDED BY VOL. 1154, PG. 370
WEST LINE DIVISION 3 - T.F. McKINNEY LEAGUE A-41
N
TEXACO CHEMICALS
VOL. 975, PG. 197
5.429 AC.
SET ½" I.R.
95'
746.04'
N 8° 16' 22" E
651.04'
S 66° 29' 36" E 6.68'
S 1° 48' 52" W 78.23'
WAREHOUSE SLAB
338.09'
SHELL ROAD
GUARD SHACK
N 81° 44' 08" W
TRACT IV
DOCK AREA
(6.169 ACRES)
275.47'
S 66° 20' 53" E
DOCK
FLARE
FND. CONC. MON.
N 8° 18' 36" E 10.09'
S 53° 44' 59" E 95.32'
S 68° 41' 36" E 78.43'
N 81° 44' 45" W 103.37'
S 8° 16' 22" W
N 8° 16' 22" E 541.10'
436.76'
FND. STEEL ROD
104.34'
P.O.B. TRACT IV
S 49° 15' 01" E 40.53'
SET ½" I.R.
412.62'
S 65° 54' 26" E
BULKHEAD
NECHES RIVER
TRACT XI
DOCK AREA
(5.807 ACRES)
429.84'
N 81° 44' 45" W
P/L EASEMENTS:
VOL. 1963, PG. 397 LUBRIZOL CORP.
VOL. 1994, PG. 75 BF GOODRICH CO.
P/L EASEMENT VOL. 1994, PG. 80 BF GOODRICH CO.
SET ½" I.R.
S 64° 55' 15" W
178.73'
S 69° 08' 18" E 79.04'
S 83° 21' 57" E 70.84'
S 8° 16' 22" W 293.25'
140.60'
101.65'
51.0'
FND. CONC. MON.
C.L. Fc. CORNER
TRACT XI P.O.B.
TEXACO, INC. ESMT.
0.9 ACRE
VOL. 198, PG. 59

LOCATION OF P.O.B. FOR VARIOUS TRACTS FROM SOUTHEAST CORNER DIVISION NO. 3 T.F. McKINNEY LEAGUE		
TRACT NO.	BEARING & DISTANCE ALONG EAST LINE DIVISION NO. 3	BEARING & DISTANCE FROM EAST LINE DIVISION NO. 3
X	N 08°16'22"E 14,900.01'	N 81°43'38" W 110.00'
IV	N 08°16'22"E 16,764.96'	N 81°43'38" W 579.13'
XI	N 08°16'22"E 16,863.36'	N 81°43'38" W 0.00'



LOCATION MAP

This is to certify that the tract(s) platted by this drawing are in Flood Zone "C" (above the 100 year flood plain) as defined by the National Flood Insurance Program and shown on Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83).

H. E. Fischer, Texas RPS No. 1432

The undersigned hereby certifies to THE FIRST NATIONAL BANK OF CHICAGO, as Collateral Agent, Commonwealth Land Title Company of Dallas, and the Uniroyal Goodrich Tire Company, that, as of the date hereof, this survey correctly shows, on the basis of a field transit survey and in accordance with the current Minimum Standard Detail Requirements for Land Title Surveys jointly established and adopted by ATA and ACSM (i) a fixed and determinable position and location of the land described hereon (including the position of the point of beginning); (ii) the location of all principal improvements situated on the land; and (iii) all driveways or other cuts in the curbs along any street upon which the land abuts. Except as shown on said print of survey there are no visible easements or rights of way affecting the land or other easements or rights of way of which the undersigned has been advised or which are of record nor, except as shown, are there any building restriction or set-back lines, party walls, encroachments or overhangs of any improvements upon any easements, rights of way or adjacent land, or encroachments by improvements located on adjacent land upon the described land. The print of survey reflects boundary lines of the described land which "close" by engineering calculation. In addition, the undersigned hereby certifies that this map was made from an actual survey, and that both map and survey are correct to the best of my knowledge and belief.

H. E. Fischer, Texas RPS #1432

APPROVED: [signature]

DATE: 6-2-88

STATE OF TEXAS · H. E. FISCHER · 1432 · REGISTERED PUBLIC SURVEYOR

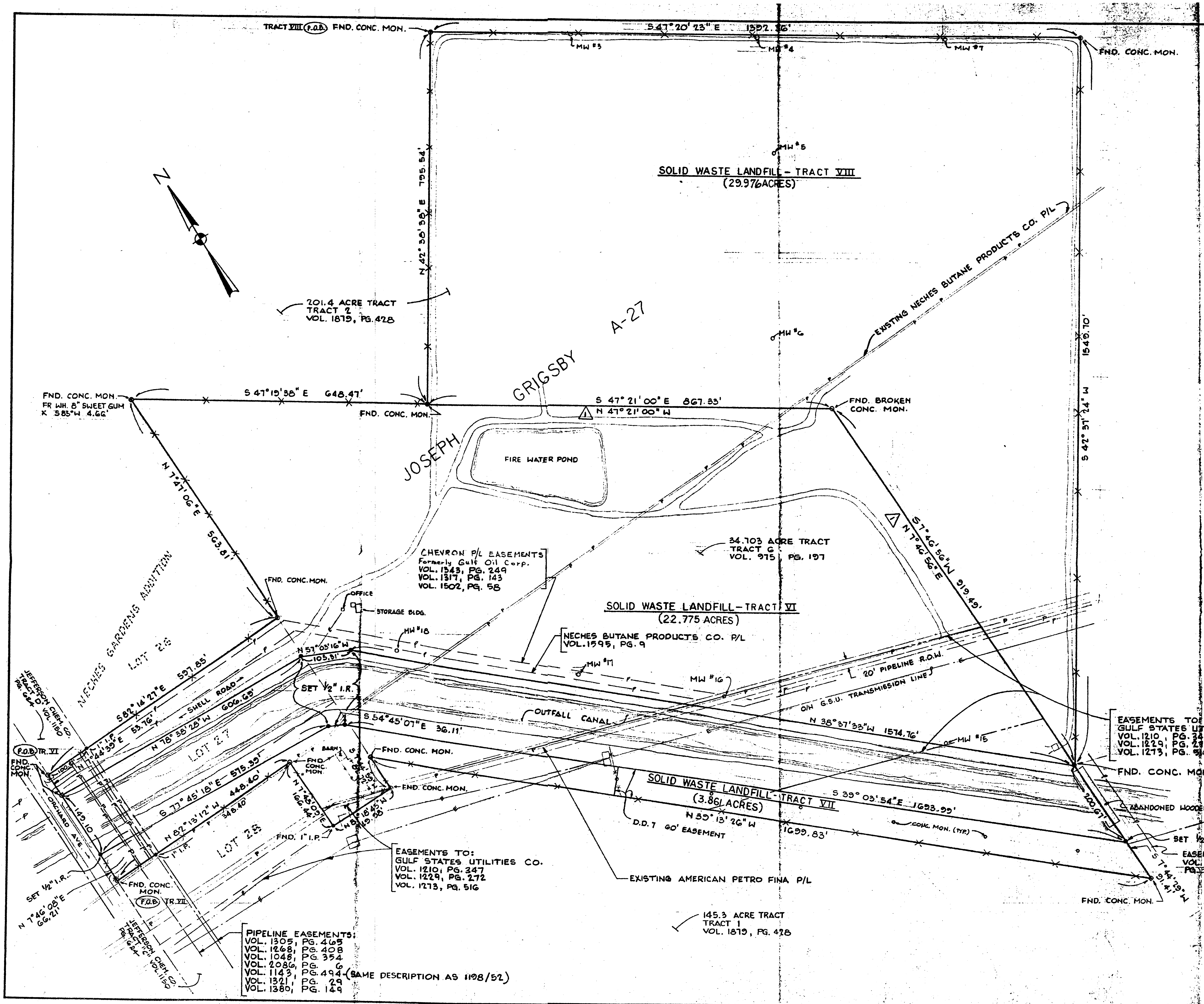
JUN 23 1988

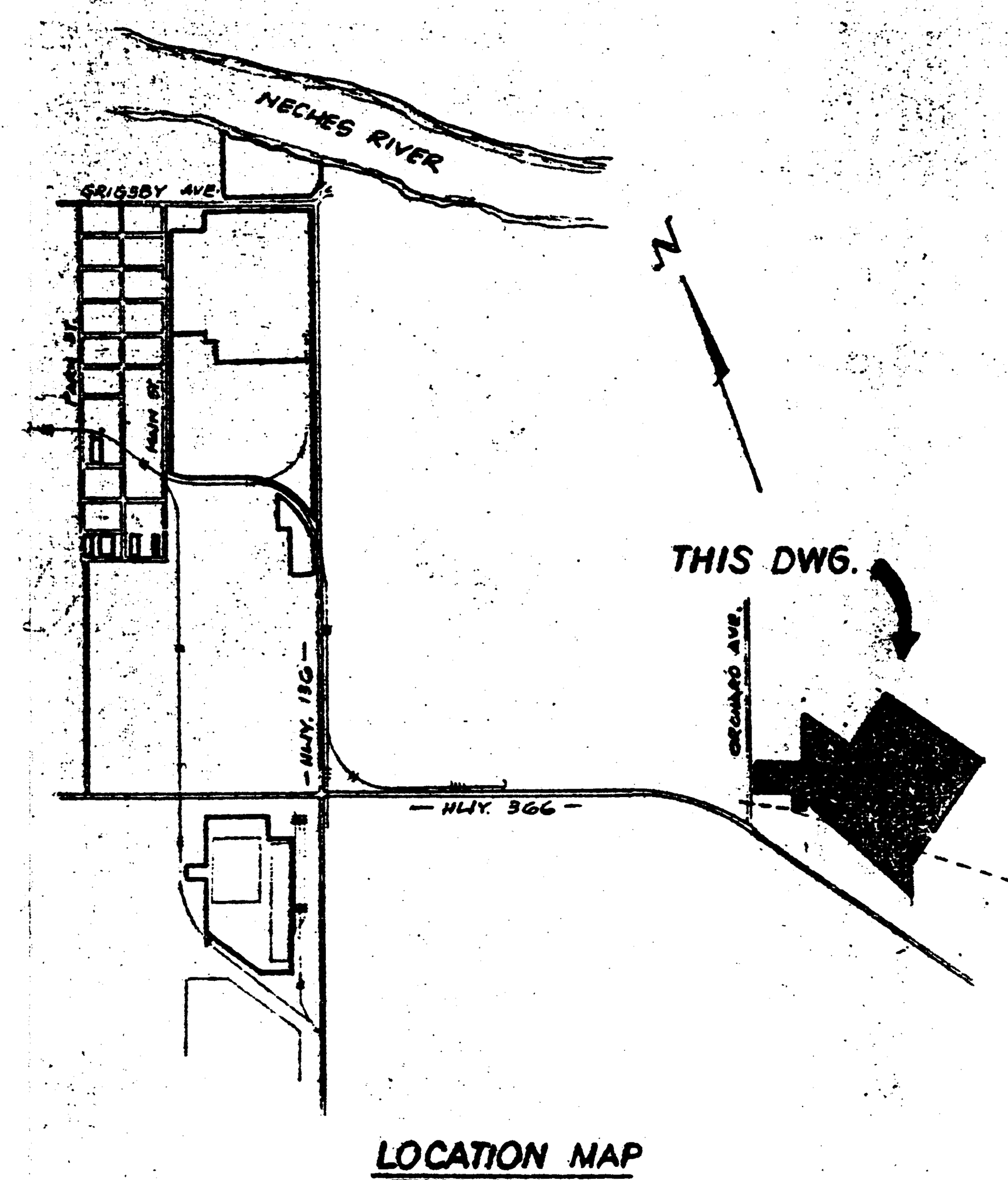
DEEVY & SHANNON, INC.
Consulting Engineers

NORTH AMERICAN LAND SERVICES CORP.
SURVEY OF THE UNIROYAL GOODRICH TIRE COMPANY PROPERTIES
JEFFERSON COUNTY, TEXAS SHT. 3

	BY	DATE		DRAWING NO.	ISSUE
DRAWN	RW	5/20/88	JOB NO. 8826	8826-3	⚠ 1
CHECKED	JLS		SCALE 1" = 100'		

STANPAT PRODUCTS INC. PORT WASHINGTON N.Y. #3





LOCATION MAP

This is to certify that the tracts platted by this drawing are in Flood Zone "C" (above the 100 year flood plain) as defined by the National Flood Insurance Program and shown on Flood Insurance Rate Map No. 485500 0005 D (revised 1-6-83).

H. E. Fischer, Texas RPS No. 1432

The undersigned hereby certifies to THE FIRST NATIONAL BANK OF CHICAGO, as Collateral Agent, Commonwealth Land Title Company of Dallas, and the Uniroyal Goodrich Tire Company, that, as of the date hereof, this survey correctly shows, on the basis of a field transit survey and in accordance with the current Minimum Standard Detail Requirements for Land Title Surveys jointly established and adopted by ATA and ACSM (i) a fixed and determinable position and location of the land described hereon (including the position of the point of beginning); (ii) the location of all principal improvements situated on the land; and (iii) all driveways or other cuts in the curbs along any street upon which the land abuts. Except as shown on said print of survey there are no visible easements or rights of way affecting the land or other easements or rights of way of which the undersigned has been advised or which are of record nor, except as shown, are there any building restriction or set-back lines, party walls, encroachments or overhangs of any improvements upon any easements, rights of way or adjacent land, or encroachments by improvements located on adjacent land upon the described land. The print of survey reflects boundary lines of the described land which "close" by engineering calculation. In addition, the undersigned hereby certifies that this map was made from an actual survey, and that both map and survey are correct to the best of my knowledge and belief.

H. E. Fischer, Texas RPS #1432

APPROVED: H. E. Fischer

DATE: 6-2-88

STATE OF TEXAS — H. E. FISCHER — 1432 — REGISTERED PUBLIC SURVEYOR

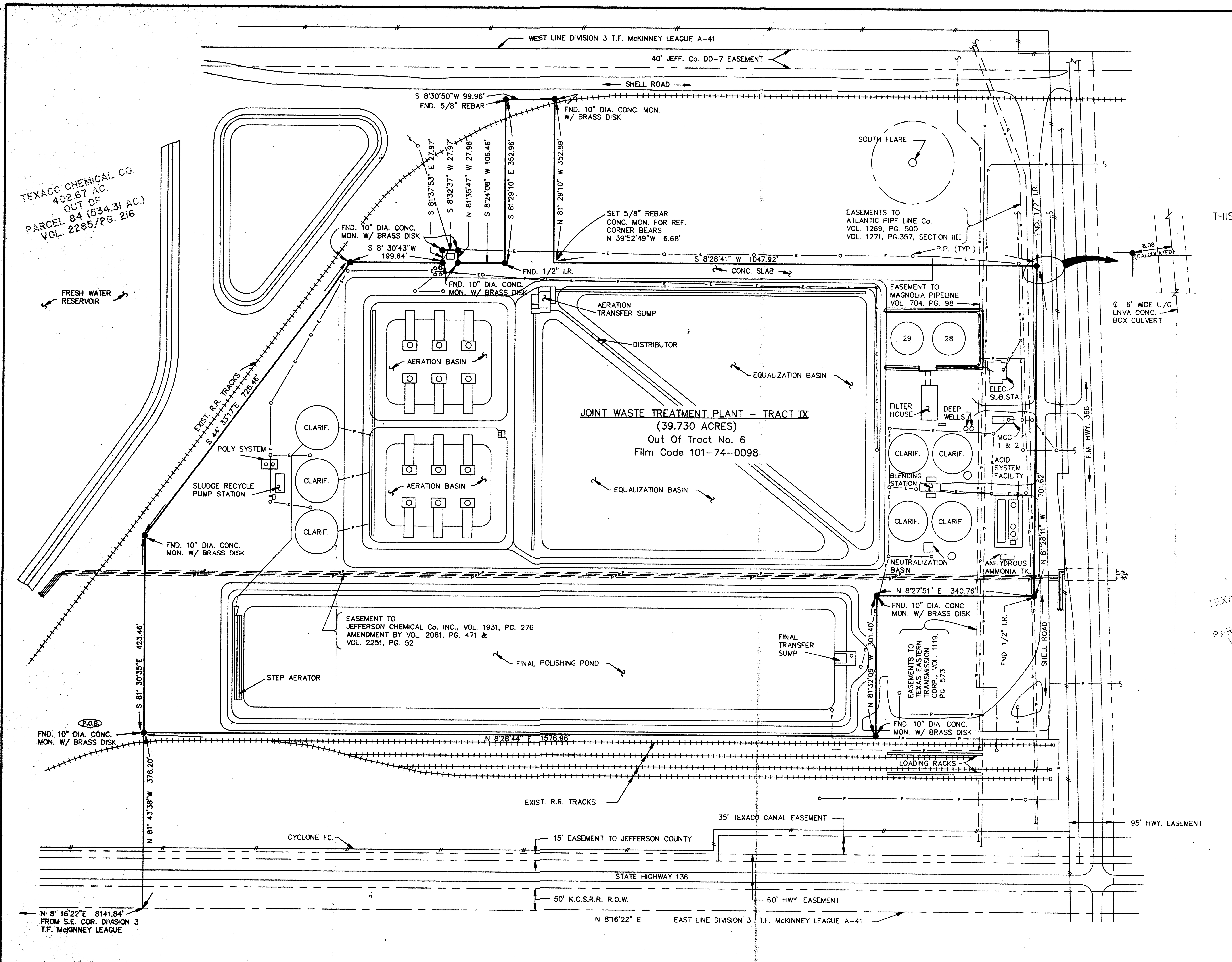
JUN 23 1988

DEEVY AND SHANNON
CONSULTING ENGINEERS
BEAUMONT, TEXAS

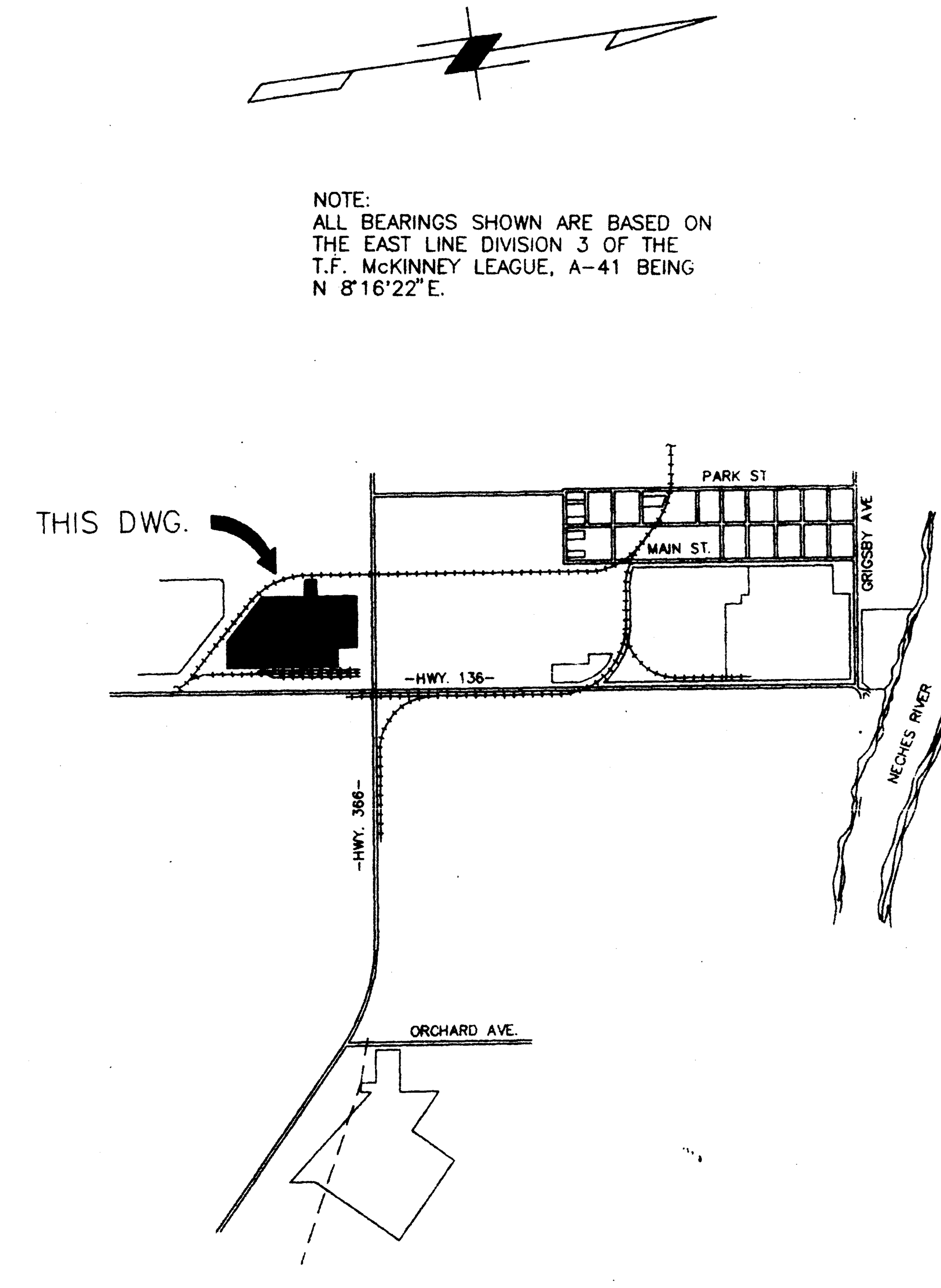
NORTH AMERICAN LAND SERVICES CORP.
SURVEY OF THE UNIROYAL GOODRICH
TIRE COMPANY PROPERTIES
JEFFERSON COUNTY, TEXAS SH. 5

	BY	DATE		DRAWING NO.	ISSUE
DRAWN	RW	5/20/88	JOB NO. 8826	8826-5	1
CHECKED	JLS		SCALE 1"=100'		

TN-2



NOTE:
ALL BEARINGS SHOWN ARE BASED ON THE EAST LINE DIVISION 3 OF THE T.F. McKINNEY LEAGUE, A-41 BEING N 8°16'22"E.



LOCATION MAP

TEXACO CHEMICAL CO. 153.424 AC. OUT OF PARCEL 8A (534.31 AC.) VOL. 2285/PG. 216

NOV 24 1992

PRELIMINARY

FOR REFERENCE ONLY

The tract shown hereon is located in Flood Zone "C" (above the 100 year flood plain) as defined by the Federal Emergency Management Agency's Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83). SANDWELL INC. does not warrant nor subscribe to the accuracy of said map.

The undersigned hereby certifies to the Buyer and Accurate Title Company that this survey correctly shows the boundary lines, dimensions and area of the land indicated hereon, correctly shows the location of all principle improvements, monuments and other visible principle items on such land, and correctly shows the location and dimensions of all alleys, streets, roads, rights-of-way, easements and other matters of record, of which the undersigned has been advised, affecting such land according to the legal description in such easements and other matters (with instrument, volume and page number indicated); except as shown, there are no visible easements, rights-of-way, party walls or conflicts, and there are no visible encroachements of adjoining premises, streets or alleys by any such improvements or monuments, and there are no visible encroachments on such land by buildings, structures or other improvements situated on adjoining premises, except as shown hereon.

H.E. Fischer
Registered Professional Land Surveyor
Texas No. 1432

DRAWING NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE
										A	FOR REFERENCE	RW	11/24/92
											PRELIMINARY ISSUE		

APPROVED	DATE
APPROVED	DATE
PROJ. NO. 261758	1758D001

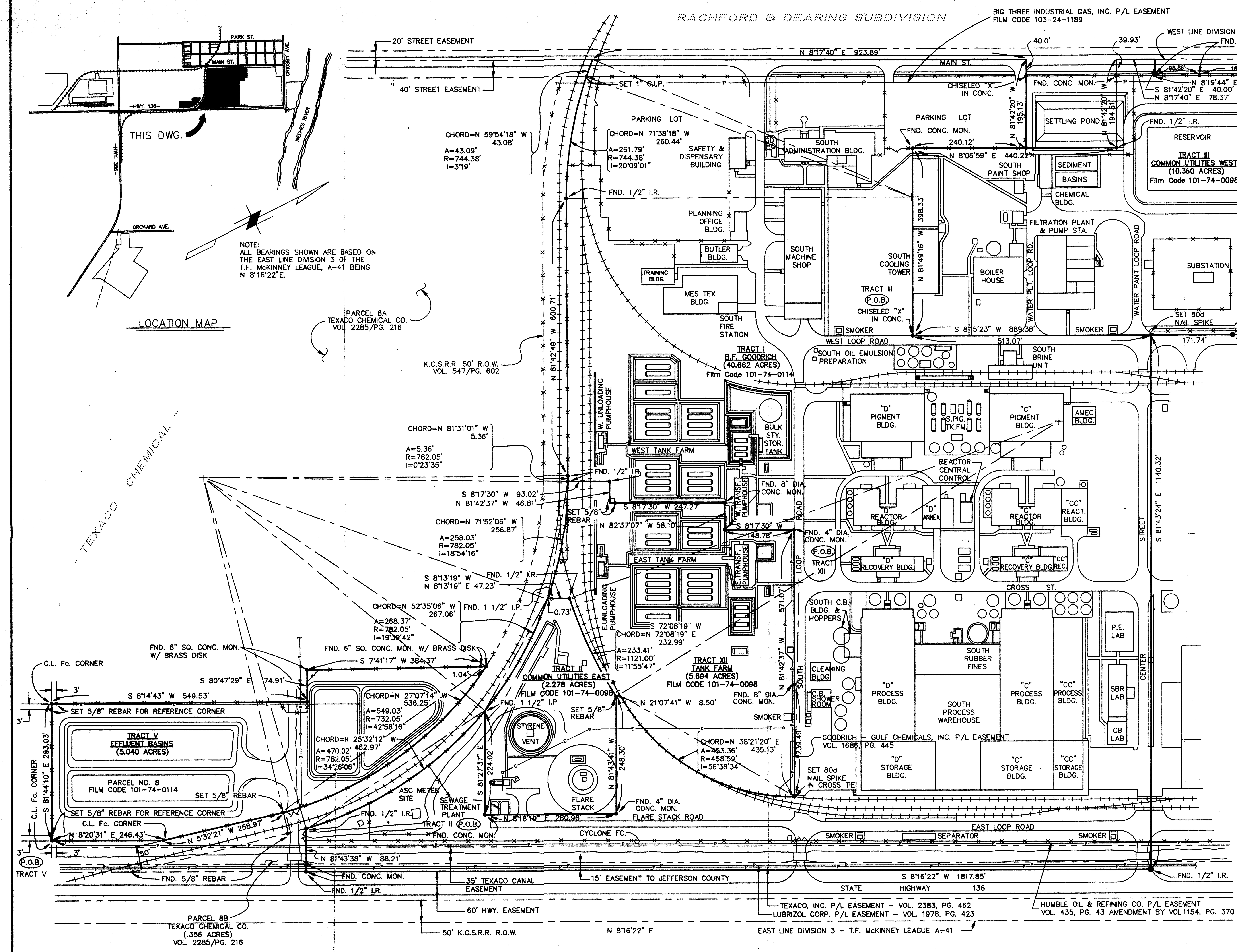
SCALE	1"=100'	MO	DAY	YR
DR'N.	RLW	11	10	92
CHK'D				
APP'D.				
APP'D.				

Sandwell
2885 INTERSTATE 10 EAST
BEAUMONT, TEXAS 77702
409-899-3030

SURVEY OF THE MICHELIN PROPERTIES
OUT OF THE
THOMAS F. McKINNEY LEAGUE, ABST. 41
JEFFERSON COUNTY, TEXAS
SHEET 1 OF 5

MICHELIN AMERICAS SERVICES
AKRON OHIO

DWG. 1758D001 REV A



LOCATION MAP
PARK ST.
MAIN ST.
GRIGSBY AVE.
-HWY. 136-
-HWY. 366-
NECHES RIVER
ORCHARD AVE.
THIS DWG.
NOTE:
ALL BEARINGS SHOWN ARE BASED ON THE EAST LINE DIVISION 3 OF THE T.F. McKINNEY LEAGUE, A-41 BEING N 8°16'22"E.
RACHFORD & DEARING SUBDIVISION
20' STREET EASEMENT
40' STREET EASEMENT
BIG THREE INDUSTRIAL GAS, INC. P/L EASEMENT
FILM CODE 103-24-1189
WEST LINE DIVISION 3 - T.F. McKINNEY LEAGUE A-41
FND. 6" SQ. CONC. MON. W/ BRASS DISC
FND. 4" PVC FILLED W/ CONC. W/ BRASS DISC
FND 10" DIA. CONC. MON. W/ 5/8" REBAR
N 8°17'40" E 923.89'
MAIN ST.
40.0'
39.93'
98.86'
166.41'
N 8°19'44" E 420.97'
S 81°42'20" E 40.00'
N 8°17'40" E 78.37'
SET 1" G.I.P.
CHISELED "X" IN CONC.
FND. CONC. MON.
N 81°42'20" W 195.13'
N 81°42'20" W 194.51'
SETTLING POND
PARKING LOT
CHORD=N 59°54'18" W 43.08'
A=43.09'
R=744.38'
I=3°19'
CHORD=N 71°38'18" W 260.44'
A=261.79'
R=744.38'
I=20°09'01"
SAFETY & DISPENSARY BUILDING
GD HQ
SOUTH ADMINISTRATION BLDG.
240.12'
N 8°06'59" E 440.22'
SOUTH PAINT SHOP
SEDIMENT
BASINS
CHEMICAL BLDG.
FND. 1/2" I.R.
RESERVOIR
TRACT III
COMMON UTILITIES WEST
(10.360 ACRES)
Film Code 101-74-0098
S 81°43'22" E 475.77'
PLANNING OFFICE BLDG.
BUTLER BLDG.
TRAINING BLDG.
MES TEX BLDG.
SOUTH FIRE STATION
SOUTH MACHINE SHOP
SOUTH COOLING TOWER
N 81°49'16" W 398.33'
TRACT III
P.O.B.
CHISELED "X" IN CONC.
BOILER HOUSE
FILTRATION PLANT & PUMP STA.
WATER PLT. LOOP RD.
WATER PANT LOOP ROAD
SUBSTATION
C.L. Fc. CORNER
CAFETERIA
FND. 6" DIA. CONC. MON.
S 8°12'34" W 49.73'
S 81°47'12" E 77.79'
SET 80d NAIL SPIKE
SMOKER
S 8°15'23" W 889.38'
171.74'
204.57'
FND. 6" DIA. CONC. MON.
WEST LOOP ROAD
513.07'
PARCEL 8A
TEXACO CHEMICAL CO.
VOL. 2285/PG. 216
K.C.S.R.R. 50' R.O.W.
VOL. 547/PG. 602
N 81°42'49" W 600.71'
TRACT I
B.F. GOODRICH
(40.662 ACRES)
Film Code 101-74-0114
SOUTH OIL EMULSION PREPARATION
SOUTH BRINE UNIT
W. UNLOADING PUMPHOUSE
BULK STY. STOR. TANK
WEST TANK FARM
"D" PIGMENT BLDG.
S.PIG. TK.FM.
"C" PIGMENT BLDG.
AMEC BLDG.
CHORD=N 81°31'01" W 5.36'
A=5.36'
R=782.05'
I=0°23'35"
FND. 1/2" I.R.
S 8°17'30" W 93.02'
N 81°42'37" W 46.81'
SET 5/8" REBAR
S 8°17'30" W 247.27'
N 82°37'07" W 58.10'
W. TRANSF. PUMPHOUSE
FND. 8" DIA. CONC. MON.
S 8°17'30" W 148.78'
FND. 4" DIA. CONC. MON.
P.O.B. TRACT XII
REACTOR CENTRAL CONTROL
"D" REACTOR BLDG.
"D" ANNEX
"C" REACTOR BLDG.
"CC" REACT. BLDG.
"D" RECOVERY BLDG.
"C" RECOVERY BLDG.
"CC" REC.
CHORD=N 71°52'06" W 256.87'
A=258.03'
R=782.05'
I=18°54'16"
EAST TANK FARM
E. TRANSF. PUMPHOUSE
S 8°13'19" W
N 8°13'19" E 47.23'
FND. 1/2" I.R.
FND. 1 1/2" I.P.
0.73'
CHORD=N 52°35'06" W 267.06'
A=268.37'
R=782.05'
I=19°39'42"
E.UNLOADING PUMPHOUSE
S 72°08'19" W
CHORD=N 72°08'19" E 232.99'
A=233.41'
R=1121.00'
I=11°55'47"
TRACT XII
TANK FARM
(5.694 ACRES)
FILM CODE 101-74-0098
N 81°42'37" W 571.07'
LOOP ROAD
SOUTH
CROSS ST.
SOUTH C.B. BLDG. & HOPPERS
SOUTH RUBBER FINES
P.E. LAB
CLEANING BLDG
C.B. SHOWER ROOM
"D" PROCESS BLDG.
SOUTH PROCESS WAREHOUSE
"C" PROCESS BLDG.
"CC" PROCESS BLDG.
SBR LAB
CB LAB
CENTER STREET
S 81°43'24" E 1140.32'
TEXACO CHEMICAL
FND. 6" SQ. CONC. MON. W/ BRASS DISK
FND. 6" SQ. CONC. MON. W/ BRASS DISK
S 7°41'17" W 384.37'
1.04'
C.L. Fc. CORNER
S 80°47'29" E 74.91'
3'
S 8°14'43" W 549.53'
SET 5/8" REBAR FOR REFERENCE CORNER
TRACT V
EFFLUENT BASINS
(5.040 ACRES)
PARCEL NO. 8
FILM CODE 101-74-0114
SET 5/8" REBAR
SET 5/8" REBAR FOR REFERENCE CORNER
C.L. Fc. CORNER
S 81°44'10" E 293.03'
C.L. Fc. CORNER
N 8°20'31" E 246.43'
N 5°32'21" W 258.97'
50'
P.O.B.
TRACT V
FND. 5/8" REBAR
CHORD=N 27°07'14" W 536.25'
A=549.03'
R=732.05'
I=42°58'16"
CHORD=N 25°32'12" W 462.97'
A=470.02'
R=782.05'
I=34°26'06"
TRACT II
COMMON UTILITIES EAST
(2.278 ACRES)
FILM CODE 101-74-0098
FND. 1 1/2" I.P.
SET 5/8" REBAR
N 21°07'41" W 8.50'
FND. 8" DIA. CONC. MON.
SMOKER
STYRENE VENT
S 81°27'37" E 224.02'
N 81°43'41" W 248.30'
ASC METER SITE
SEWAGE TREATMENT PLANT
FLARE STACK
FND. 1/2" I.R.
TRACT II P.O.B.
FND. CONC. MON.
N 8°18'19" E 280.96'
FND. 4" DIA. CONC. MON.
FLARE STACK ROAD
CHORD=N 38°21'20" E 435.13'
A=453.36'
R=458.59'
I=56°38'34"
239.49'
GOODRICH - GULF CHEMICALS, INC. P/L EASEMENT
VOL. 1686, PG. 445
SET 80d NAIL SPIKE IN CROSS TIE
"D" STORAGE BLDG.
"C" STORAGE BLDG.
"CC" STORAGE BLDG.
CYCLONE FC.
EAST LOOP ROAD
SMOKER
SEPARATOR
SMOKER
N 81°43'38" W 88.21'
FND. CONC. MON.
FND. 1/2" I.R.
35' TEXACO CANAL EASEMENT
15' EASEMENT TO JEFFERSON COUNTY
S 8°16'22" W 1817.85'
STATE HIGHWAY 136
FND. 1/2" I.R.
60' HWY. EASEMENT
TEXACO, INC. P/L EASEMENT - VOL. 2383, PG. 462
LUBRIZOL CORP. P/L EASEMENT - VOL. 1978. PG. 423
HUMBLE OIL & REFINING CO. P/L EASEMENT
VOL. 435, PG. 43 AMENDMENT BY VOL.1154, PG. 370
PARCEL 8B
TEXACO CHEMICAL CO.
(.356 ACRES)
VOL. 2285/PG. 216
50' K.C.S.R.R. R.O.W.
N 8°16'22" E
EAST LINE DIVISION 3 - T.F. McKINNEY LEAGUE A-41

LOCATION OF P.O.B. FOR VARIOUS TRACTS FROM SOUTHEAST CORNER DIVISION NO.3 T.F. McKINNEY LEAGUE		
TRACT NO.	BEARING & DISTANCE ALONG EAST LINE DIVISION NO.3	BEARING & DISTANCE FROM EAST LINE DIVISION NO.3
I & XIV	N 08°16'22" E 13,082.27'	N 81°43'38" W 110.02'
II	N 08°16'22" E 13,465.91'	N 81°43'38" W 231.83'
III	N 08°16'22" E 14,387.14'	N 81°43'38" W 1,250.18'
V	N 08°16'22" E 12,537.00'	N 81°43'38" W 175.60'
XII	N 08°16'22" E 14,130.95'	N 81°43'38" W 837.10'

NOV 2 4 1992
PRELIMINARY
FOR REFERENCE ONLY

The tract shown hereon is located in Flood Zone "C" (above the 100 year flood plain) as defined by the Federal Emergency Management Agency's Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83). Location on map determined by scale. Actual field elevation not determined unless requested. SANDWELL INC. does not warrant nor subscribe to the accuracy of the scale of said map.

The undersigned hereby certifies to the Buyer and Accurate Title Company that this survey was made on the ground of property shown hereon and correctly shows the boundary lines, dimensions and area of the land indicated hereon, correctly shows the location of all principle improvements, monuments and other visible principle items on such land, all being within the boundaries of the land except as shown hereon, and correctly shows the location and dimensions of all alleys, streets, roads, rights-of-ways, easements and other matters of record, of which the undersigned has been advised by Accurate Title Company, affecting such land according to the legal description in such easements and other matters (with instrument, book and page number indicated), there is adequate ingress and egress from the land as provided by the roads indicated hereon, and this survey correctly shows all public streets providing such access to the land together with the width and name thereof; except as shown, there are no visible easements, rights-of-way, party walls or conflicts, and there are no visible encroachements of adjoining premises, streets or alleys by any of such improvements or monuments, there are no visible encroachments on such land by buildings, structures or other improvements situated on adjoining premises.

H.E. Fischer
Registered Professional Land Surveyor
Texas No. 1432

DRAWING NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE
										A	FOR REFERENCE ONLY	RW	11/92
											PRELIMINARY ISSUE		

APPROVED DATE
APPROVED DATE
PROJ. NO 17580002
261758

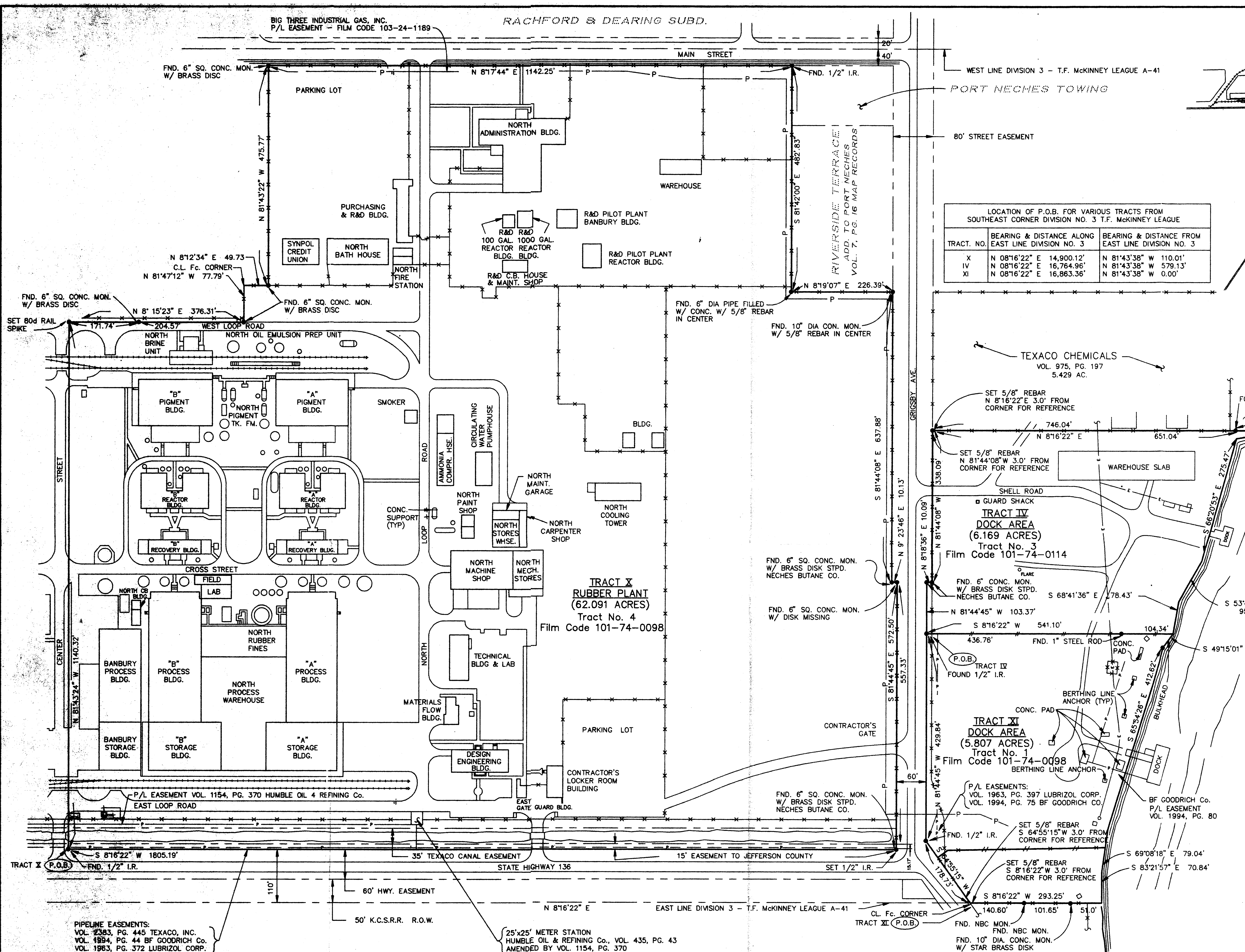
SCALE	1"=100'	MO.	DAY	YR
DR'N.	RLW	11	11	92
CHK'D.	.	.	.	.
APP'D.	.	.	.	.
APP'D.	.	.	.	.

SURVEY OF THE MICHELIN PROPERTIES
OUT OF THE
THOMAS F. McKINNEY LEAGUE, ABST. 41
JEFFERSON COUNTY, TEXAS
SHEET 2 OF 5

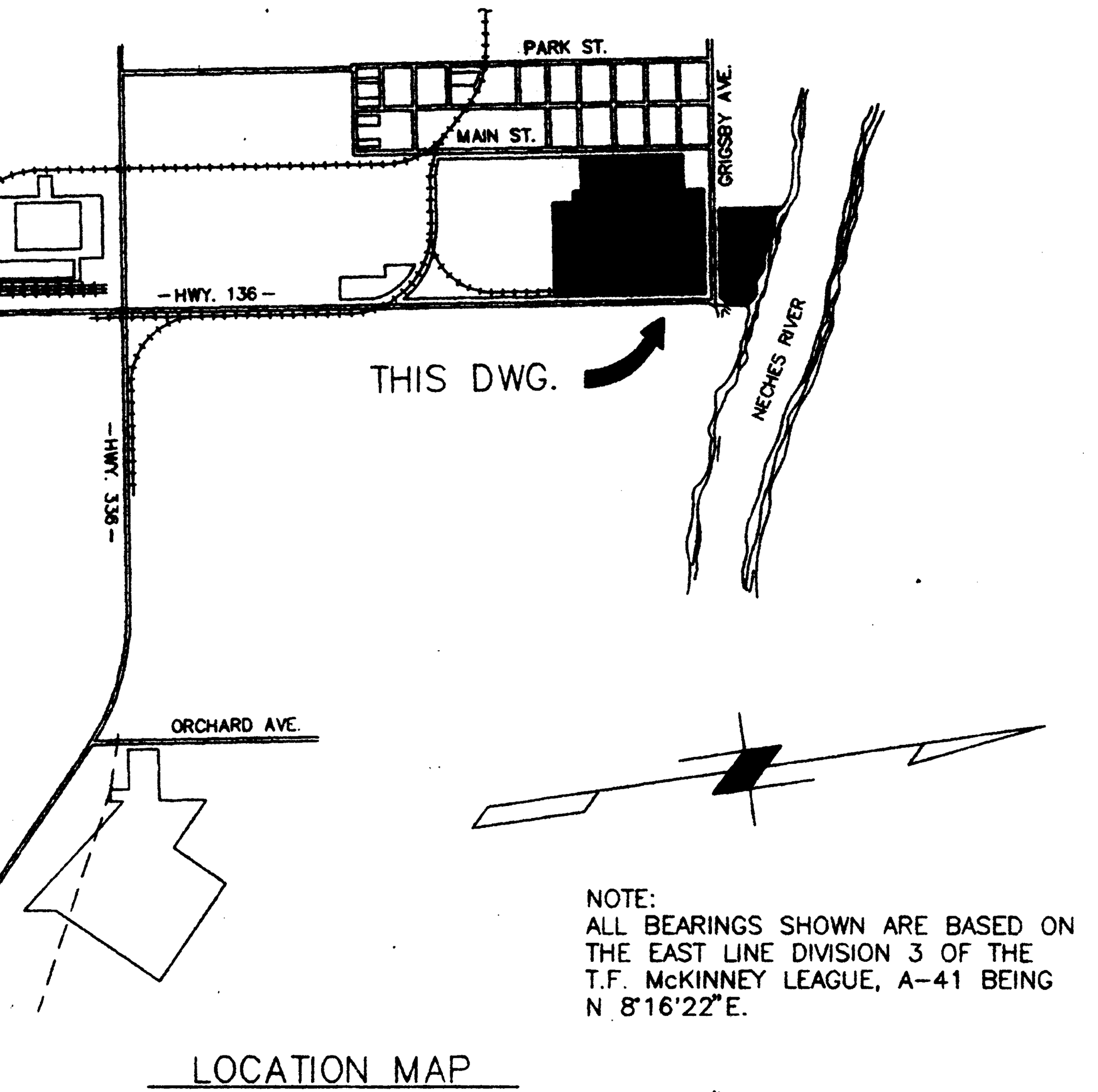
Sandwell
2885 INTERSTATE 10 EAST
BEAUMONT, TEXAS 77702
409-899-3030

MICHELIN AMERICAS SERVICES
AKRON OHIO

DWG. 1758D002 REV 1A



RACHFORD & DEARING SUBD.
BIG THREE INDUSTRIAL GAS, INC.
P/L EASEMENT – FILM CODE 103-24-1189
MAIN STREET
20'
40'
WEST LINE DIVISION 3 – T.F. McKINNEY LEAGUE A-41
PORT NECHES TOWING
80' STREET EASEMENT
FND. 6" SQ. CONC. MON. W/ BRASS DISC
N 8°17'44" E 1142.25'
FND. 1/2" I.R.
PARKING LOT
NORTH ADMINISTRATION BLDG.
WAREHOUSE
N 81°43'22" W 475.77'
S 81°42'00" E 482.83'
RIVERSIDE TERRACE
ADD. TO PORT NECHES
VOL. 7, PG. 16 MAP RECORDS
PURCHASING & R&D BLDG.
R&D PILOT PLANT BANBURY BLDG.
R&D 100 GAL. REACTOR BLDG.
R&D 1000 GAL. REACTOR BLDG.
R&D PILOT PLANT REACTOR BLDG.
R&D C.B. HOUSE & MAINT. SHOP
SYNPOL CREDIT UNION
NORTH BATH HOUSE
NORTH FIRE STATION
N 8°12'34" E 49.73
C.L. Fc. CORNER
N 81°47'12" W 77.79'
FND. 6" SQ. CONC. MON. W/ BRASS DISC
N 8° 15'23" E 376.31'
SET 80d RAIL SPIKE
171.74'
204.57'
WEST LOOP ROAD
N 8°19'07" E 226.39'
FND. 6" DIA PIPE FILLED W/ CONC. W/ 5/8" REBAR IN CENTER
FND. 10" DIA CON. MON. W/ 5/8" REBAR IN CENTER
NORTH BRINE UNIT
NORTH OIL EMULSION PREP UNIT
"B" PIGMENT BLDG.
NORTH PIGMENT TK. FM.
"A" PIGMENT BLDG.
SMOKER
CIRCULATING WATER PUMPHOUSE
AMMONIA COMPR. HSE.
ROAD
BLDG.
"B" REACTOR BLDG.
"A" REACTOR BLDG.
"B" RECOVERY BLDG.
"A" RECOVERY BLDG.
STREET
CONC. SUPPORT (TYP)
LOOP
NORTH PAINT SHOP
NORTH MAINT. GARAGE
NORTH STORES WHSE.
NORTH CARPENTER SHOP
NORTH COOLING TOWER
CROSS STREET
FIELD
LAB
NORTH CB BLDG.
NORTH MACHINE SHOP
NORTH MECH. STORES
TRACT X
RUBBER PLANT
(62.091 ACRES)
Tract No. 4
Film Code 101-74-0098
NORTH RUBBER FINES
CENTER
N 81°43'24" W 1140.32'
BANBURY PROCESS BLDG.
"B" PROCESS BLDG.
NORTH PROCESS WAREHOUSE
"A" PROCESS BLDG.
NORTH
TECHNICAL BLDG & LAB
MATERIALS FLOW BLDG.
BANBURY STORAGE BLDG.
"B" STORAGE BLDG.
"A" STORAGE BLDG.
DESIGN ENGINEERING BLDG.
PARKING LOT
CONTRACTOR'S LOCKER ROOM BUILDING
EAST GATE GUARD BLDG.
CONTRACTOR'S GATE
P/L EASEMENT VOL. 1154, PG. 370 HUMBLE OIL 4 REFINING Co.
EAST LOOP ROAD
S 8°16'22" W 1805.19'
TRACT X P.O.B.
FND. 1/2" I.R.
35' TEXACO CANAL EASEMENT
15' EASEMENT TO JEFFERSON COUNTY
STATE HIGHWAY 136
SET 1/2" I.R.
110'
60' HWY. EASEMENT
50' K.C.S.R.R. R.O.W.
N 8°16'22" E
EAST LINE DIVISION 3 – T.F. McKINNEY LEAGUE A-41
PIPELINE EASEMENTS:
VOL. 2383, PG. 445 TEXACO, INC.
VOL. 1994, PG. 44 BF GOODRICH Co.
VOL. 1963, PG. 372 LUBRIZOL CORP.
25'x25' METER STATION
HUMBLE OIL & REFINING Co., VOL. 435, PG. 43
AMENDED BY VOL. 1154, PG. 370
S 81°44'08" E 637.88'
N 9° 23'46" E 10.13'
S 81°44'45" E 572.50'
557.33'
60'
15.17'
GRIGSBY AVE.
FND. 6" SQ. CONC. MON. W/ BRASS DISK STPD. NECHES BUTANE CO.
FND. 6" SQ. CONC. MON. W/ DISK MISSING
TEXACO CHEMICALS
VOL. 975, PG. 197
5.429 AC.
SET 5/8" REBAR N 8°16'22"E 3.0' FROM CORNER FOR REFERENCE
746.04'
N 8°16'22" E
651.04'
FOUND 1/2" I.R.
95'
S 66°29'36"E 6.68'
S 1°48'52 W 78.23'
SET 5/8" REBAR N 81°44'08"W 3.0' FROM CORNER FOR REFERENCE
338.09'
WAREHOUSE SLAB
SHELL ROAD
GUARD SHACK
TRACT IV
DOCK AREA
(6.169 ACRES)
Tract No. 3
Film Code 101-74-0114
N 8°18'36" E 10.09'
N 81°44'08" W
S 66°20'53" E 275.47'
DOCK
FLARE
FND. 6" CONC. MON. W/ BRASS DISK STPD. NECHES BUTANE CO.
S 68°41'36" E 78.43'
N 81°44'45" W 103.37'
S 8°16'22" W 541.10'
436.76'
104.34'
FND. 1" STEEL ROD
CONC. PAD
P.O.B. TRACT IV
FOUND 1/2" I.R.
BERTHING LINE ANCHOR (TYP)
CONC. PAD
TRACT XI
DOCK AREA
(5.807 ACRES)
Tract No. 1
Film Code 101-74-0098
BERTHING LINE ANCHOR
429.84'
N 81°44'45" W
S 65°54'26" E 412.62'
BULKHEAD
P/L EASEMENTS:
VOL. 1963, PG. 397 LUBRIZOL CORP.
VOL. 1994, PG. 75 BF GOODRICH CO.
BF GOODRICH Co. P/L EASEMENT VOL. 1994, PG. 80
FND. 1/2" I.R.
SET 5/8" REBAR S 64°55'15"W 3.0' FROM CORNER FOR REFERENCE
S 64°55'15" W 178.73'
SET 5/8" REBAR S 8°16'22"W 3.0' FROM CORNER FOR REFERENCE
S 8°16'22" W 293.25'
140.60'
101.65'
51.0'
CL. Fc. CORNER
TRACT XI P.O.B.
FND. NBC MON.
FND. NBC MON.
FND. 10" DIA. CONC. MON. W/ STAR BRASS DISK
S 53°44'59" E 95.32'
S 49°15'01" E 40.53'
S 69°08'18" E 79.04'
S 83°21'57" E 70.84'
NECHES RIVER



LOCATION MAP

NOTE:
ALL BEARINGS SHOWN ARE BASED ON THE EAST LINE DIVISION 3 OF THE T.F. McKINNEY LEAGUE, A-41 BEING N 8°16'22"E.

LOCATION OF P.O.B. FOR VARIOUS TRACTS FROM SOUTHEAST CORNER DIVISION NO. 3 T.F. McKINNEY LEAGUE		
TRACT. NO.	BEARING & DISTANCE ALONG EAST LINE DIVISION NO. 3	BEARING & DISTANCE FROM EAST LINE DIVISION NO. 3
X	N 08°16'22" E 14,900.12'	N 81°43'38" W 110.01'
IV	N 08°16'22" E 16,764.96'	N 81°43'38" W 579.13'
XI	N 08°16'22" E 16,863.36'	N 81°43'38" W 0.00'

NOV 2 4 1992

FOR REFERENCE ONLY

PRELIMINARY

The tract shown hereon is located in Flood Zone "C" (above the 100 year flood plain) as defined by the Federal Emergency Management Agency's Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83). Location on map determined by scale. Actual field elevation not determined unless requested. SANDWELL INC. does not warrant nor subscribe to the accuracy of the scale of said map.

The undersigned hereby certifies to the Buyer and Accurate Title Company that this survey was made on the ground of property shown hereon and correctly shows the boundary lines, dimensions and area of the land indicated hereon, correctly shows the location of all principle improvements, monuments and other visible principle items on such land, all being within the boundaries of the land except as shown hereon, and correctly shows the location and dimensions of all alleys, streets, roads, rights-of-ways, easements and other matters of record, of which the undersigned has been advised by Accurate Title Company, affecting such land according to the legal description in such easements and other matters (with instrument, book and page number indicated), there is adequate ingress and egress from the land as provided by the roads indicated hereon, and this survey correctly shows all public streets providing such access to the land together with the width and name thereof; except as shown, there are no visible easements, rights-of-way, party walls or conflicts, and there are no visible encroachements of adjoining premises, streets or alleys by any of such improvements or monuments, there are no visible encroachments on such land by buildings, structures or other improvements situated on adjoining premises.

H.E. Fischer
Registered Professional Land Surveyor
Texas No. 1432

DRAWING NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE	REV.	DESCRIPTION	BY / DATE	APP'D / DATE
										A	FOR REFERENCE ONLY	RW	1/92
											PRELIMINARY ISSUE		

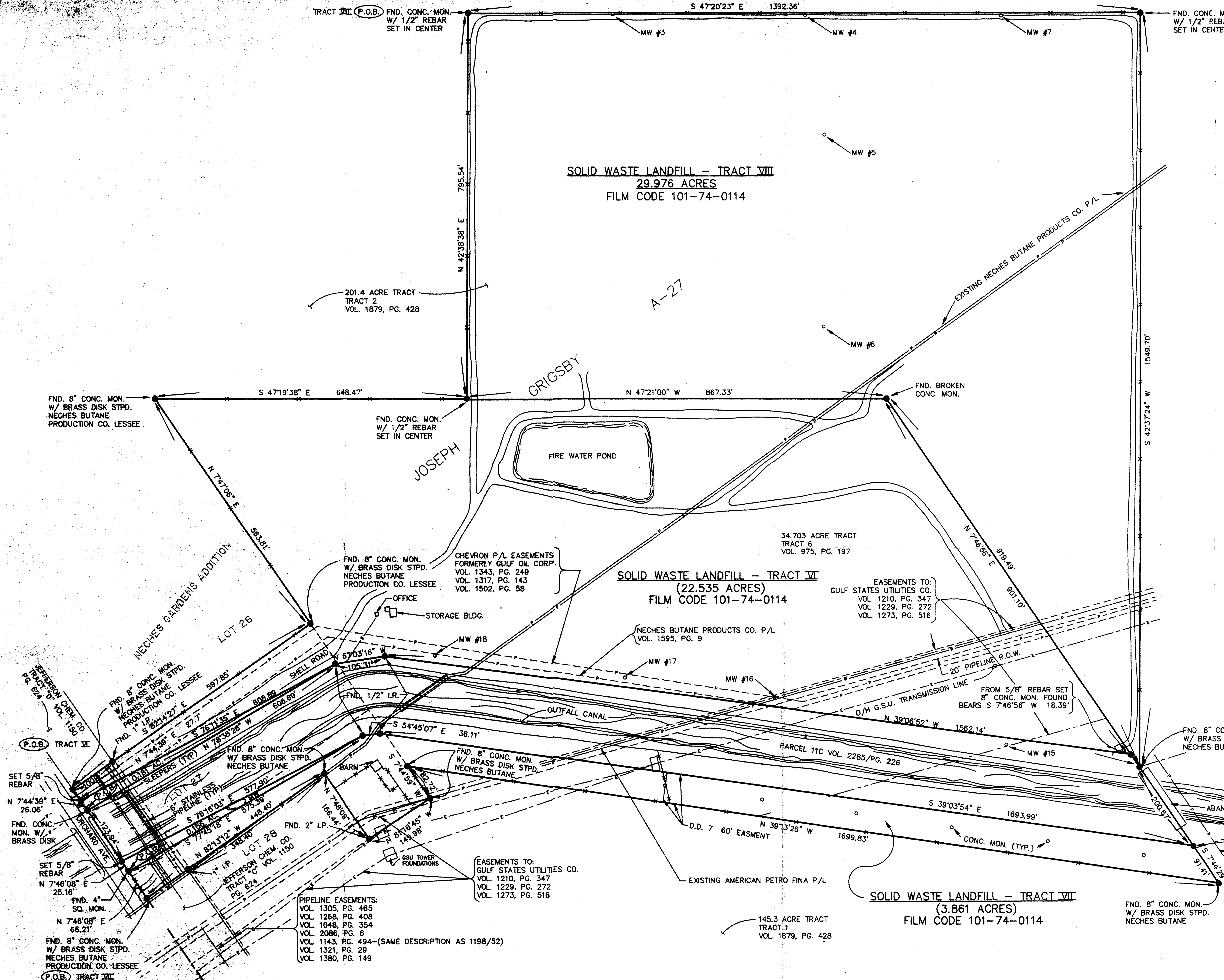
APPROVED	DATE	SCALE	1"=100'	MO.	DAY	YR.
APPROVED	DATE	DR'N.	C.S.	11	18	92
PROJ. NO. 261758		CHK'D.				
		APP'D.				
		APP'D.				

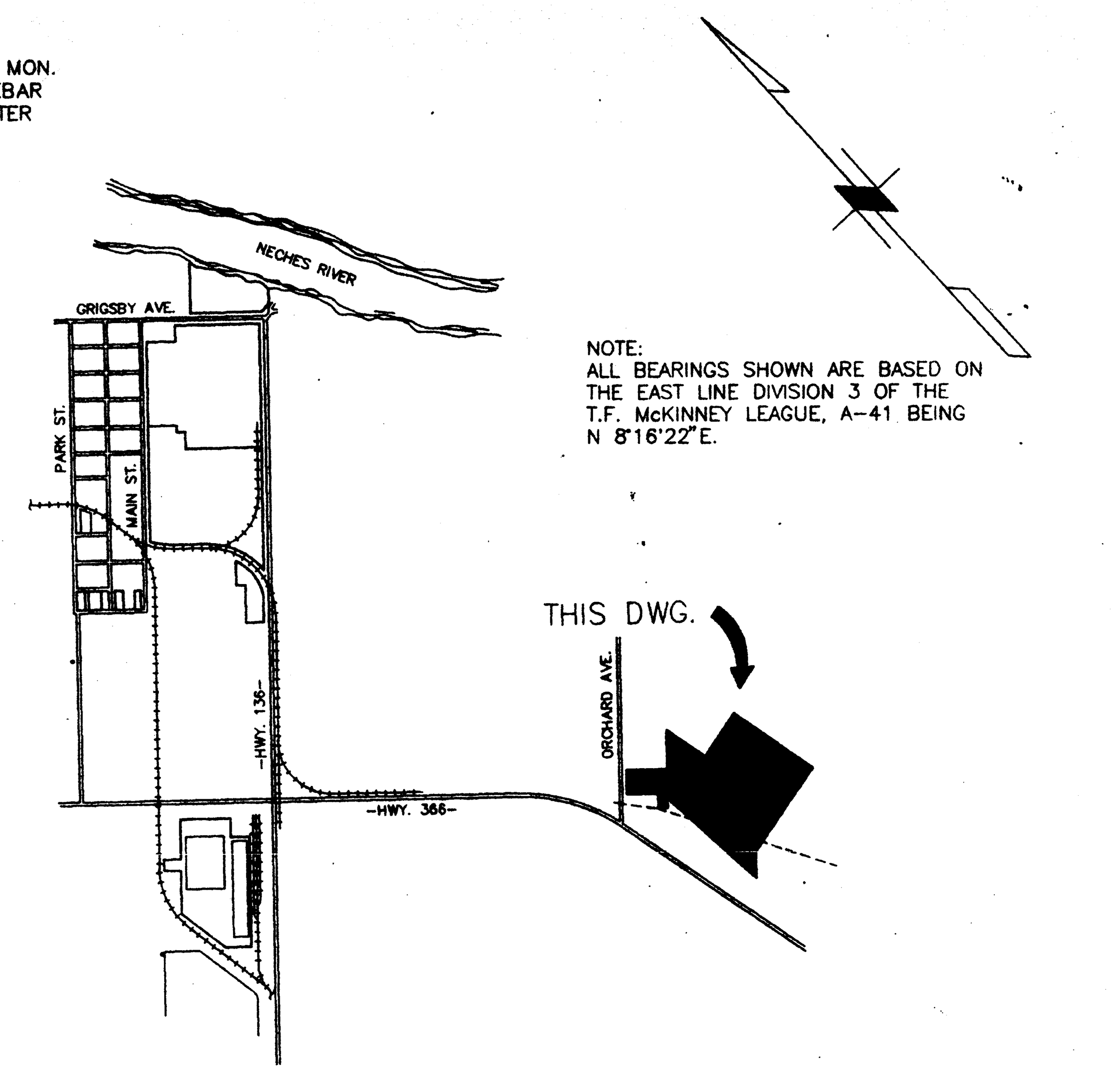
SURVEY OF THE MICHELIN PROPERTIES
OUT OF THE
THOMAS F. McKINNEY LEAGUE, ABST. 41
JEFFERSON COUNTY, TEXAS
SHEET 3 OF 5

Sandwell
2885 INTERSTATE 10 EAST
BEAUMONT, TEXAS 77702
409-899-3030

MICHELIN AMERICAS SERVICES
AKRON OHIO

DWG. 1758D003 REV A





LOCATION MAP

NOTE:
ALL BEARINGS SHOWN ARE BASED ON THE EAST LINE DIVISION 3 OF THE T.F. McKINNEY LEAGUE, A-41 BEING N 8°16'22"E.

The tract shown hereon is located in Flood Zone "C" (above the 100 year flood plain) as defined by the Federal Emergency Management Agency's Flood Insurance Rate Map No. 480385 0305 B (effective dated 6-1-83). Location on map determined by scale. Actual field elevation not determined unless requested. SANDWELL INC. does not warrant nor subscribe to the accuracy of the scale of said map.

The undersigned hereby certifies to the Buyer and Accurate Title Company that this survey was made on the ground of property shown hereon and correctly shows the boundary lines, dimensions and area of the land indicated hereon, correctly shows the location of all principle improvements, monuments and other visible principle items on such land, all being within the boundaries of the land except as shown hereon, and correctly shows the location and dimensions of all alleys, streets, roads, rights-of-ways, easements and other matters of record, of which the undersigned has been advised by Accurate Title Company, affecting such land according to the legal description in such easements and other matters (with instrument, book and page number indicated), there is adequate ingress and egress from the land as provided by the roads indicated hereon, and this survey correctly shows all public streets providing such access to the land together with the width and name thereof; except as shown, there are no visible easements, rights-of-way, party walls or conflicts, and there are no visible encroachements of adjoining premises, streets or alleys by any of such improvements or monuments, there are no visible encroachments on such land by buildings, structures or other improvements situated on adjoining premises.

H.E. Fischer
Registered Professional Land Surveyor
Texas No. 1432

FOR REFERENCE ONLY
PRELIMINARY
NOV 24 1992

DRAWING NO.	REFERENCE DRAWING TITLE	REV.	DESCRIPTION	BY DATE	APP'D DATE	REV.	DESCRIPTION	BY DATE	APP'D DATE	REV.	PRELIMINARY ISSUE	BY DATE	APP'D DATE
										A	FOR REFERENCE ONLY	KW	11/92

APPROVED	DATE	SCALE 1"=100'	MO.	DAY	YR.
APPROVED	DATE	DR'N. C.S.	11	18	92
PROJ. NO. 261758		CHK'D			
		APP'D			
		APP'D			

SURVEY OF THE MICHELIN PROPERTIES
OUT OF THE
THOMAS F. McKINNEY LEAGUE, ABST. 41
JEFFERSON COUNTY, TEXAS
SHEET 5 OF 5

Sandwell
2885 INTERSTATE 10 EAST
BEAUMONT, TEXAS 77702
409-899-3030

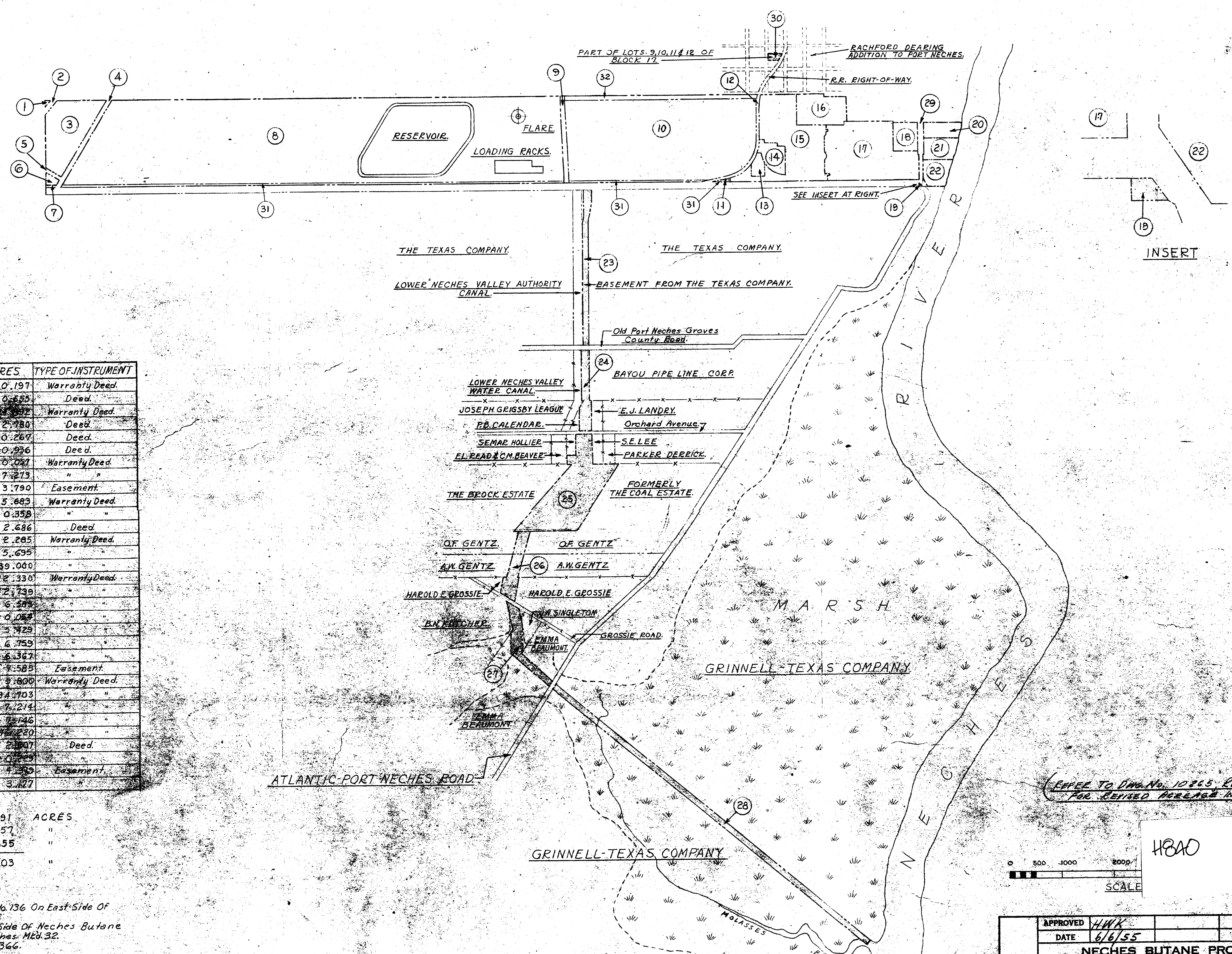
THIS DRAWING IS THE PROPERTY OF SANDWELL INC. AND MUST BE RETURNED TO SANDWELL INC. ON REQUEST. ITS CONTENTS ARE SECRET AND CONFIDENTIAL. ANY INFORMATION OBTAINED BY INSPECTION OF THIS DRAWING SHALL NOT BE USED FOR ANY OTHER THAN THE SPECIFIED PURPOSE FOR WHICH ITS INSPECTION IS AUTHORIZED BY SANDWELL INC.

MICHELIN AMERICAS SERVICES
AKRON OHIO

DWG. 1758D005 REV A

DR.W.G. NO. E-9400 | FILE DR.W.R. 82

BILL OF MATERIAL				
MARK	NO.	DESCRIPTION	MAT'L.	REMARKS



	OWNER	LAND-USE	ACRES	TYPE OF INSTRUMENT
1	Neches Butane Products Co.	Unoccupied	0.197	Warranty Deed.
2	K.C.S. Railway Company's Main Line.	Rail Road Right-Of-Way.	0.655	Deed.
3	Neches Butane Products Co.	Unoccupied.	[illegible]	Warranty Deed.
4	State Highway No 347.	State Highway Right-Of-Way.	2.780	Deed.
5	Jefferson County (Stine Road)	County Road Right-Of-Way.	0.267	Deed.
6	C. Doornbos.	Dairy.	0.936	Deed.
7	Neches Butane Products Co	Unoccupied	10.057	Warranty Deed.
8	" " " "	Unoccupied Except As Noted.	377.273	" "
9	" " " "	State Highway # F.M. 366 Right-Of-Way.	3.790	Easement.
10	" " " "	Plant Site.	125.683	Warranty Deed.
11	" " " "	Unoccupied.	0.358	" "
12	K.C.S. R.R. Company's Neches Belt Line.	Rail Road Right-Of-Way.	2.686	Deed.
13	Goodrich-Gulf Chemicals, Inc.	Plant Site (Utility Area)	2.285	Warranty Deed.
14	Texas-U.S. Chemical Co.	Plant Site	5.695	" "
15	Goodrich-Gulf Chemicals, Inc.	"	39.000	" "
16	" " "	" (Utility Area)	12.330	Warranty Deed.
17	Texas-U.S. Chemical Co.	" "	42.739	" "
18	Goodrich-Gulf Chemicals, Inc.	Unoccupied.	6.585	" "
19	Texas-U.S. Chemical Co.	Unoccupied.	0.054	" "
20	Neches Butane Products Co.	River Pumping Station.	5.429	" "
21	Goodrich-Gulf Chemicals, Inc.	Warehouse Area.	6.759	" "
22	Texas-U.S. Chemical Co.	Dock Area.	6.367	" "
23	The Texas Company.	N.B.P.C. Outfall Canal.	7.585	Easement.
24	Neches Butane Products, Co.	" "	5.800	Warranty Deed.
25	" " " "	" "	34.703	" "
26	" " " "	" "	7.214	" "
27	" " " "	" "	7.146	" "
28	" " " "	" "	16.220	" "
29	Jefferson County	Ave "A" Of City Of Port Neches.	2.807	Deed.
30	Neches Butane Products Co.	Unoccupied.	0.229	" "
31	" " " "	15' R.O.W. For State Highway Spur No 136.	4.399	Easement.
32	" " " "	40' R.O.W. For Main Street Of Port Neches.	3.177	"

SUMMARY OF ACREAGE

NECHES BUTANE PRODUCTS CO.	608.991	ACRES
GOODRICH-GULF CHEMICALS, INC.	66.957	"
TEXAS-U.S. CHEMICAL CO.	54.855	"
TOTAL FOR THREE PLANTS	730.803	"

NOTE:
The Above Acreage For Neches Butane Products Co. Includes:
A-15'-0" Wide Easement For Texas State Highway Spur No. 136 On East Side Of N.B.P.C. Property. Mkd. 31.
A-40'-0" Wide Easement To Jefferson County On West Side Of Neches Butane Products Co. Property For Main Street Of Port Neches. Mkd. 32.
A-95'-0" Wide Easement for Texas State Highway F.M.# 366.
Acreage Mkd. 8 Includes Acreage Mkd. 31.
Acreage Mkd. 10 Includes Acreage Mkd. 31 & 32.
Acreage Mkd. 11 Includes Acreage Mkd. 31.

(REFER TO DWG. NO. 10265, REV. 2, OF AUG. 16, 1966 FOR REVISED ACREAGE IN T.F. McKINNEY LG.)

H840

0 500 1000 2000 5000
SCALE

APPROVED	HWK
DATE	6/6/55

NECHES BUTANE PRODUCTS CO.
PORT NECHES, TEXAS

ACREAGE MAP SHOWING LANDS OWNED BY THE NECHES BUTANE PRODUCTS CO., GOODRICH-GULF CHEMICALS, INC. & TEXAS-U.S. CHEMICAL CO. IN JEFFERSON COUNTY, TEXAS.

REV.	BY:	SCALE	DRAWN BY: WK	DATE: 6-6-55	DRAWING NO.	FILE DR.W.R.
		1" = 1000'			E-9400	82

N E C H E S R I V E R

C. F. GOODRICH DOCK

RIVER PUMP HOUSE

TOP OF BANK

3" NAT. GAS

8" FIRE WATER
1½" DRINKING WATER

6" TRANSFER

BASE LINE (1961)

ELEC. SERVICE

TO B.F.G. DOCK

TRANSFORMER STATION

CONC. SLAB (BLDG. REMOVED)

OLD DOCK REMOVED

T.U.S. DOCK

3" NAT. GAS

TO N.B. DOCK

POWER LINE

TRANSFORMER STATION

22'-0" W. X 8'-10" D. INTAKE CONDUIT

2" DRINKING WATER

2½" NAT. GAS

2" NAT. GAS

3" SERVICE WATER

13,200 VOLTS

NECHES BUTANE

B. F. GOODRICH CO.

TEXAS U.S. CHEMICAL CO.

GRIGSBY DRIVE
(FORMALLY AVENUE A)

NO.	REVISION	DATE	BY

TEXAS - U. S. CHEMICAL COMPANY
PORT NECHES, TEXAS

PIPING AND UTILITIES AT DOCK AREA

DRAWN BY L.A.H. CHECKED BY RKMc
WORK ORDER APPROVED BY JAP
SCALE 1" = 50.0'
DATE 6-2-80

136-B-2

REVISION	
A	ORIGINAL ISSUE 9-23-80 WB
B	REVISED USEABLE ACREAGE & ADDED MAIN PLANT ACREAGE AT L.B.R.C. 9-29-80 WB

REFERENCE DRAWINGS	
GEN. ARR.	
BILLS OF MAT.	
DET. DRWGS.	

THIS DRAWING IS THE PROPERTY OF THE B F GOODRICH COMPANY, CHEMICAL GROUP, hereinafter called the Company. This drawing is loaned with the expressed agreement that the drawing and information therein contained are the property of the Company and will not be reproduced, copied, or otherwise disposed of, directly or indirectly, and will not be used in whole or in part to assist in making or to furnish any information for the making of drawings, prints or other reproductions thereof, or for the making of apparatus or parts thereof, except upon written permission of the Company first obtained and specific as to each case. The acceptance of this drawing will be construed as an acceptance of the foregoing agreement.

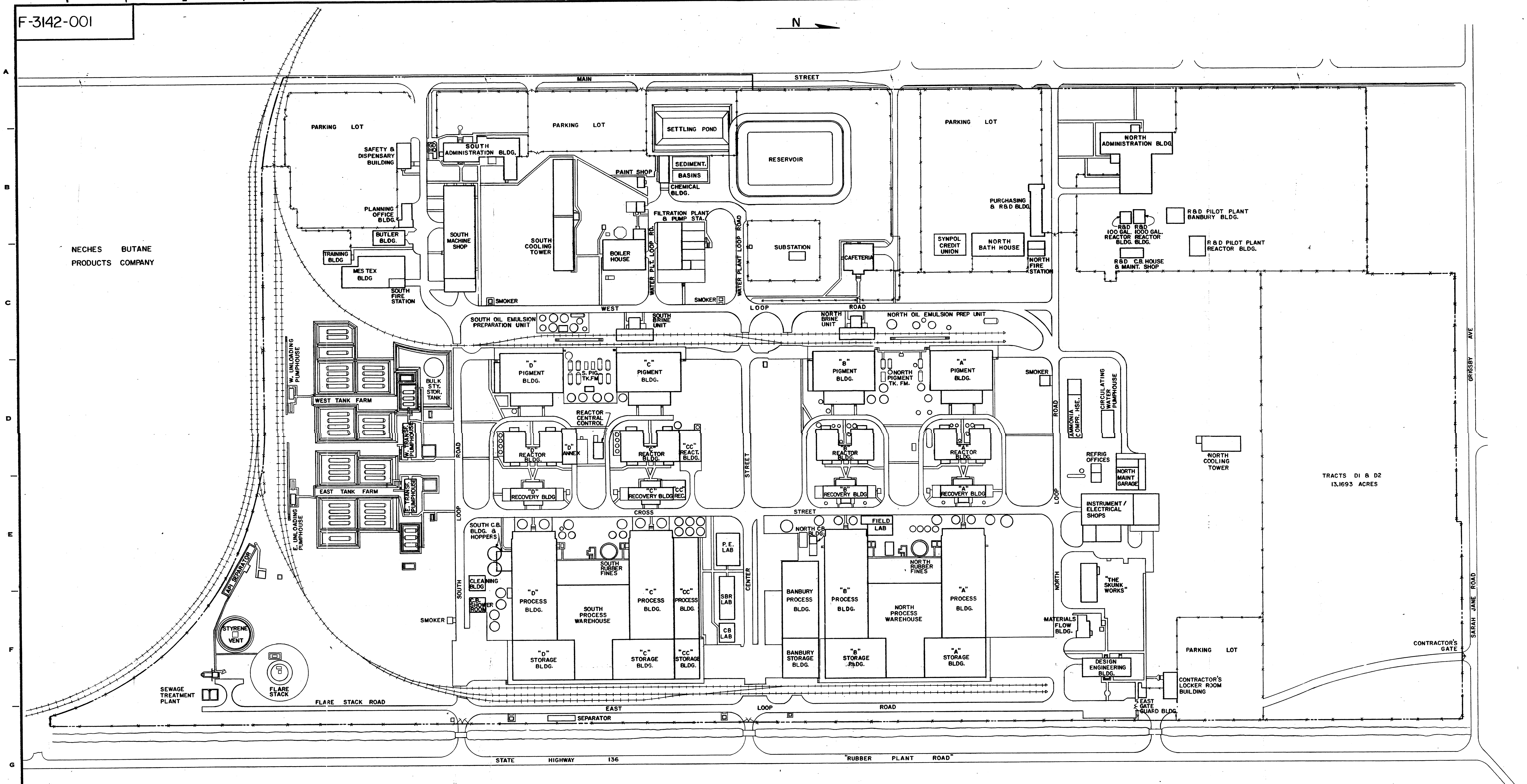
Drawn By WB Traced By Checked By
Date 9-22-80 Date Date
Scale 1" = 300'

DEPT. BLDG. FLR.
APPROVED WAF
DATE 9/23/80

PLOT PLAN
OWNERSHIP OF VARIOUS PLANT AREAS

BFGoodrich Chemical Group
JOB NO.
A. R. NO.
G-2738

F-3142-001


N
MAIN STREET
PARKING LOT
SAFETY & DISPENSARY BUILDING
PLANNING OFFICE BLDG.
BUTLER BLDG.
TRAINING BLDG
MES TEX BLDG
SOUTH FIRE STATION
NECHES BUTANE PRODUCTS COMPANY
GD HQ
SOUTH ADMINISTRATION BLDG.
SOUTH MACHINE SHOP
SMOKER
PARKING LOT
SOUTH COOLING TOWER
PAINT SHOP
SETTLING POND
SEDIMENT.
BASINS
CHEMICAL BLDG.
FILTRATION PLANT & PUMP STA.
BOILER HOUSE
WATER PLT. LOOP RD.
WATER PLANT LOOP ROAD
RESERVOIR
SUBSTATION
CAFETERIA
PARKING LOT
PURCHASING & R&D BLDG.
SYNPOL CREDIT UNION
NORTH BATH HOUSE
NORTH FIRE STATION
NORTH ADMINISTRATION BLDG.
R&D PILOT PLANT BANBURY BLDG.
R&D 100 GAL. REACTOR BLDG.
R&D 1000 GAL. REACTOR BLDG.
R&D PILOT PLANT REACTOR BLDG.
R&D C.B. HOUSE & MAINT. SHOP
WEST LOOP ROAD
SOUTH OIL EMULSION PREPARATION UNIT
SOUTH BRINE UNIT
NORTH BRINE UNIT
NORTH OIL EMULSION PREP UNIT
W. UNLOADING PUMPHOUSE
WEST TANK FARM
BULK STY. STOR. TANK
W. TRANSF. PUMPHOUSE
EAST TANK FARM
E. TRANSF. PUMPHOUSE
E. UNLOADING PUMPHOUSE
"D" PIGMENT BLDG.
S. PIG. TK.FM.
"C" PIGMENT BLDG.
"B" PIGMENT BLDG.
NORTH PIGMENT TK. FM.
"A" PIGMENT BLDG.
SMOKER
REACTOR CENTRAL CONTROL
"D" REACTOR BLDG.
"D" ANNEX
"C" REACTOR BLDG.
"CC" REACT. BLDG.
"B" REACTOR BLDG.
"A" REACTOR BLDG.
"D" RECOVERY BLDG
"C" RECOVERY BLDG
"CC" REC.
"B" RECOVERY BLDG
"A" RECOVERY BLDG
SOUTH LOOP ROAD
CENTER STREET
CROSS STREET
NORTH LOOP ROAD
AMMONIA COMPR. HSE.
CIRCULATING WATER PUMPHOUSE
REFRIG OFFICES
NORTH MAINT GARAGE
INSTRUMENT / ELECTRICAL SHOPS
NORTH COOLING TOWER
TRACTS D1 & D2
13.1693 ACRES
GRIGSBY AVE
SOUTH C.B. BLDG. & HOPPERS
CLEANING BLDG
C.B. SHOWER ROOM
SMOKER
"D" PROCESS BLDG.
SOUTH RUBBER FINES
SOUTH PROCESS WAREHOUSE
"C" PROCESS BLDG.
"CC" PROCESS BLDG.
P.E. LAB
SBR LAB
CB LAB
FIELD LAB
NORTH CB BLDG.
BANBURY PROCESS BLDG.
"B" PROCESS BLDG.
NORTH RUBBER FINES
NORTH PROCESS WAREHOUSE
"A" PROCESS BLDG.
"THE SKUNK WORKS"
MATERIALS FLOW BLDG.
"D" STORAGE BLDG.
"C" STORAGE BLDG.
"CC" STORAGE BLDG.
BANBURY STORAGE BLDG.
"B" STORAGE BLDG.
"A" STORAGE BLDG.
DESIGN ENGINEERING BLDG.
CONTRACTOR'S LOCKER ROOM BUILDING
EAST GATE GUARD BLDG.
PARKING LOT
CONTRACTOR'S GATE
SARAH JANE ROAD
API SEPARATOR
STYRENE VENT
SEWAGE TREATMENT PLANT
FLARE STACK
FLARE STACK ROAD
EAST LOOP ROAD
SEPARATOR
STATE HIGHWAY 136
"RUBBER PLANT ROAD"

REVISION
(A) AS BUILT 11-25-86 WDB
(B) PROCESS ROADS REV. 6-6-87 WDB

REFERENCE DRAWINGS
GEN. ARR. P & P 983-A-501.1
BILLS OF MAT.
DET. DRWGS. BFG PN-G-3116
SYNPOL 101-A-31

Drawn By WDB Traced By Checked By
Date 11-14-86 Date Date
Scale 1" = 100'-0"

DEPT. BLDG. FLR.
APPROVED
DATE

PLANT MAP

AMERIPOL SYNPOL COMPANY
PORT NECHES SBR PLANT
PORT NECHES, TEXAS

D.J. No.
G.P.O./A.R. No.
F-3142-001
REV. B

3.1(c)(i)

F-3142-001


N
MAIN STREET
PARKING LOT
SOUTH ADMINISTRATION BLDG.
DISPENSARY BUILDING
PLANNING OFFICE BLDG.
BUTLER BLDG.
FITNESS CENTER
MES TEX BLDG
SOUTH FIRE STATION
SOUTH MACHINE SHOP
SOUTH COOLING TOWER
PAINT SHOP
SETTLING POND
SEDIMENT. BASINS
CHEMICAL BLDG.
RESERVOIR
BOILER HOUSE
FILTRATION PLANT & PUMP STA.
WATER PLT. LOOP RD.
WATER PLANT LOOP ROAD
SUBSTATION
CAFETERIA N.I.U.
SYNPOL CREDIT UNION
NORTH BATH HOUSE
PURCHASING & R&D BLDG
NORTH FIRE STATION
NORTH ADMINISTRATION BLDG
R&D PILOT PLANT BANBURY BLDG.
R&D 100 GAL. REACTOR BLDG.
R&D 1000 GAL. REACTOR BLDG.
R&D PILOT PLANT REACTOR BLDG.
R&D C.B. HOUSE & MAINT. SHOP
NECHES BUTANE PRODUCTS COMPANY
SMOKER
WEST LOOP ROAD
SOUTH OIL EMULSION PREPARATION UNIT
SOUTH BRINE UNIT
NORTH BRINE UNIT
NORTH OIL EMULSION PREP UNIT
W. UNLOADING PUMPHOUSE
WEST TANK FARM
BULK STY. STOR. TANK
W. TRANSF. PUMPHOUSE
EAST TANK FARM
E. TRANSF. PUMPHOUSE
E. UNLOADING PUMPHOUSE
"D" PIGMENT BLDG.
S. PIG. TK.FM.
"C" PIGMENT BLDG.
"B" PIGMENT BLDG.
NORTH PIGMENT TK. FM.
"A" PIGMENT BLDG.
REACTOR CENTRAL CONTROL
"D" REACTOR BLDG.
"D" ANNEX
"C" REACTOR BLDG.
"CC" REACT. BLDG.
"B" REACTOR BLDG.
"A" REACTOR BLDG.
"D" RECOVERY BLDG
"C" RECOVERY BLDG
"CC" REC.
"B" RECOVERY BLDG
"A" RECOVERY BLDG
SOUTH LOOP ROAD
CROSS STREET
CENTER STREET
NORTH LOOP ROAD
AMMONIA COMPR. HSE.
CIRCULATING WATER PUMPHOUSE
REFRIG OFFICES
NORTH MAINT GARAGE
INSTRUMENT / ELECTRICAL SHOPS
NORTH COOLING TOWER
TRACTS D1 & D2
13.1693 ACRES
GRIGSBY AVE
SARAH JANE ROAD
SOUTH C.B. BLDG. & HOPPERS
CLEANING BLDG
C.B. SHOWER ROOM
"D" PROCESS BLDG.
SOUTH RUBBER FINES
SOUTH PROCESS WAREHOUSE
"C" PROCESS BLDG.
"CC" PROCESS BLDG.
PROCESS FOREMAN OFFICE
SBR LAB
CB LAB
NORTH CB BLDG
FIELD LAB
BANBURY PROCESS BLDG.
"B" PROCESS BLDG.
NORTH RUBBER FINES
NORTH PROCESS WAREHOUSE
"A" PROCESS BLDG.
"THE SKUNK WORKS"
MATERIALS FLOW BLDG.
"D" STORAGE BLDG.
"C" STORAGE BLDG.
"CC" STORAGE BLDG.
BANBURY STORAGE BLDG.
"B" STORAGE BLDG.
"A" STORAGE BLDG.
DESIGN ENGINEERING BLDG.
PARKING LOT
CONTRACTOR'S LOCKER ROOM BUILDING
CONTRACTOR'S GATE
EAST GATE GUARD BLDG.
API SEPARATOR
STYRENE VENT N.I.U.
FLARE STACK
SEWAGE TREATMENT PLANT
FLARE STACK ROAD
EAST LOOP ROAD
SEPARATOR
STATE HIGHWAY 136
"RUBBER PLANT ROAD"

9/18
Alan Graham –
More due diligence!
This was presented to
Pilko & Assoc. on 9/10
by J.E. LeBlanc.
Nancy

REVISION
(A) AS BUILT 11-25-86 WDB
(B) PROCESS ROADS REV. 6-6-87 WDB
(C) ADDED TANKS & CHANGED BLDG. NOM. 7-31-92 WDB

REFERENCE DRAWINGS
GEN. ARR. P&P 983-A-501.1
BILLS OF MAT.
DET. DRWGS. BFG PN-G-3116
SYNPOL 101-A-31

Drawn By WDB Traced By Checked By
Date 11-14-86 Date Date
Scale 1" = 100'-0"

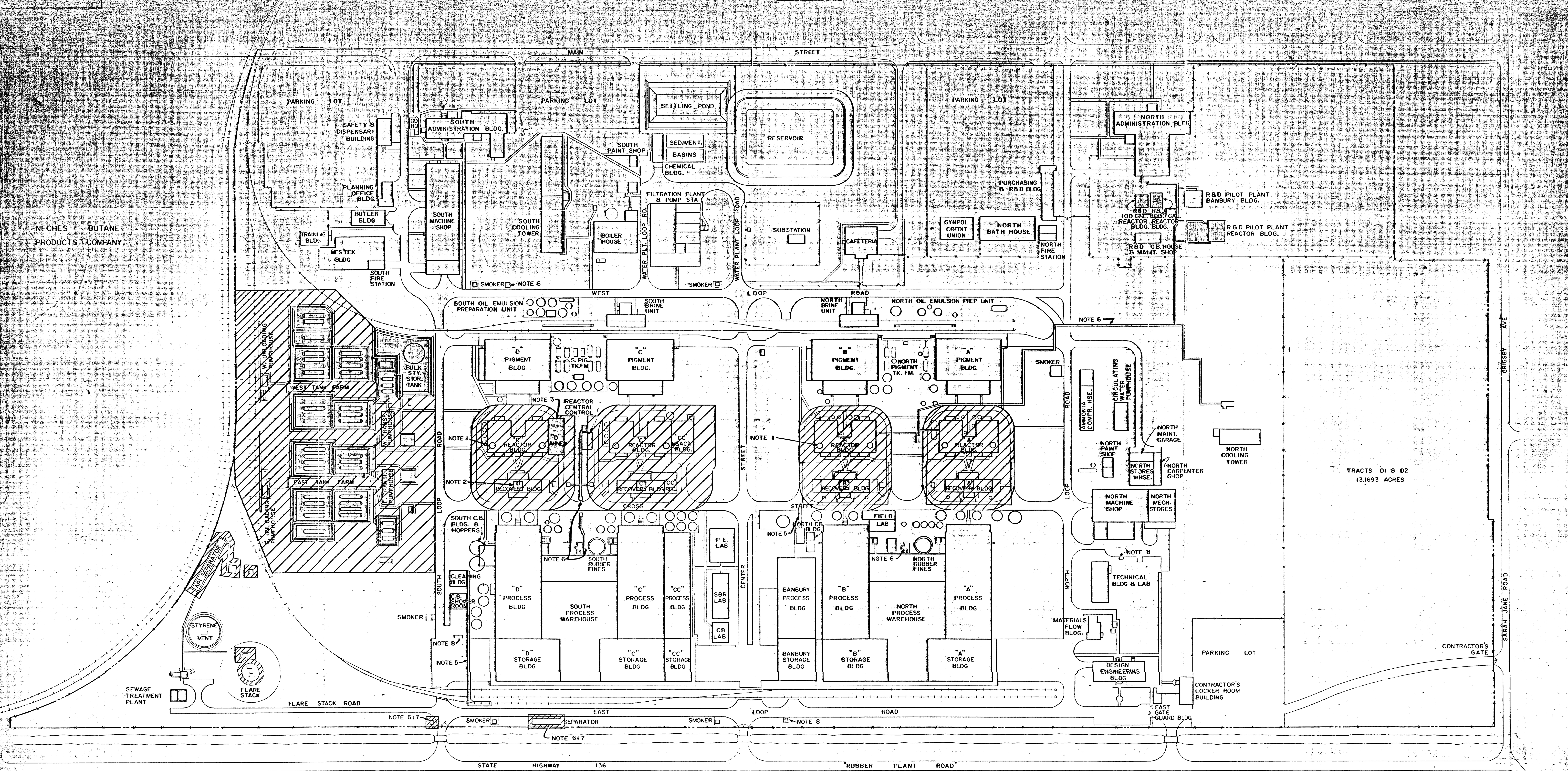
DEPT. BLDG. FLR.
APPROVED
DATE

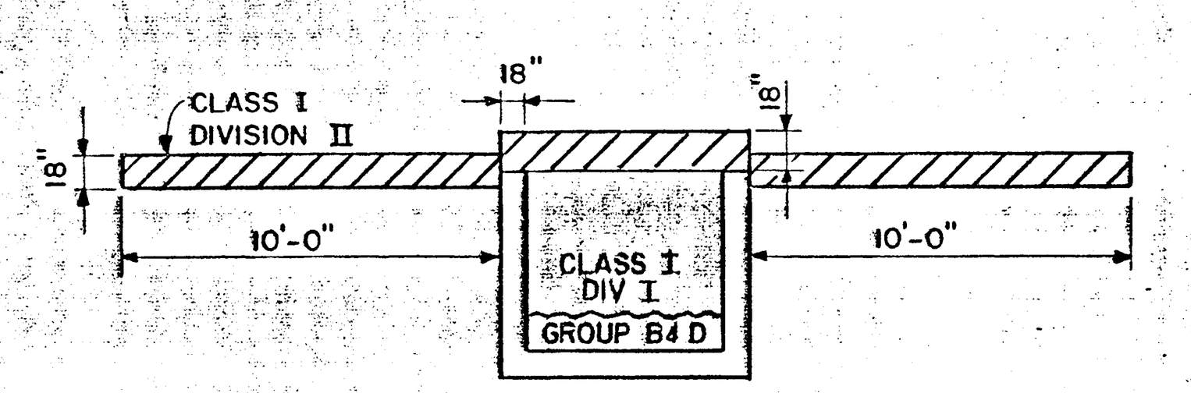
PLANT MAP

AMERIPOL SYNPOL COMPANY
PORT NECHES SBR PLANT
PORT NECHES, TEXAS

D.J. No.
G.P.O./A.R. No.
F-3142-001 REV. C

F-3142-005


N
MAIN STREET
PARKING LOT
SAFETY & DISPENSARY BUILDING
GD HQ
SOUTH ADMINISTRATION BLDG.
PARKING LOT
SETTLING POND
RESERVOIR
PARKING LOT
NORTH ADMINISTRATION BLDG
SEDIMENT. BASINS
SOUTH PAINT SHOP
CHEMICAL BLDG.
PLANNING OFFICE BLDG.
BUTLER BLDG.
TRAINING BLDG
MES TEX BLDG
SOUTH FIRE STATION
SOUTH MACHINE SHOP
SOUTH COOLING TOWER
BOILER HOUSE
FILTRATION PLANT & PUMP STA.
WATER PLT. LOOP RD.
WATER PLANT LOOP ROAD
SUBSTATION
CAFETERIA
PURCHASING & R&D BLDG
SYNPOL CREDIT UNION
NORTH BATH HOUSE
NORTH FIRE STATION
R&D 100 GAL. REACTOR BLDG.
R&D 1000 GAL. REACTOR BLDG.
R&D PILOT PLANT BANBURY BLDG.
R&D PILOT PLANT REACTOR BLDG.
R&D C.B. HOUSE & MAINT. SHOP
NECHES BUTANE PRODUCTS COMPANY
SMOKER
NOTE 8
WEST LOOP ROAD
SOUTH OIL EMULSION PREPARATION UNIT
SOUTH BRINE UNIT
NORTH BRINE UNIT
NORTH OIL EMULSION PREP UNIT
NOTE 6
W. UNLOADING PUMPHOUSE
BULK STY. STOR. TANK
WEST TANK FARM
W. TRANSF. PUMPHOUSE
EAST TANK FARM
E. TRANSF. PUMPHOUSE
E. UNLOADING PUMPHOUSE
"D" PIGMENT BLDG.
S. PIG. TK. FM
"C" PIGMENT BLDG.
"B" PIGMENT BLDG.
NORTH PIGMENT TK. FM.
"A" PIGMENT BLDG.
NOTE 3
REACTOR CENTRAL CONTROL
NOTE 1
"D" REACTOR BLDG.
"D" ANNEX
"C" REACTOR BLDG.
"CC" REACT. BLDG.
"B" REACTOR BLDG.
"A" REACTOR BLDG.
NOTE 2
"D" RECOVERY BLDG
"C" RECOVERY BLDG
"CC" REC.
"B" RECOVERY BLDG
"A" RECOVERY BLDG
CROSS STREET
CENTER STREET
SOUTH LOOP ROAD
NORTH LOOP ROAD
AMMONIA COMPR. HSE.
CIRCULATING WATER PUMPHOUSE
NORTH MAINT. GARAGE
NORTH PAINT SHOP
NORTH STORES WHSE.
NORTH CARPENTER SHOP
NORTH COOLING TOWER
TRACTS D1 & D2
13.1693 ACRES
GRIGSBY AVE
NORTH MACHINE SHOP
NORTH MECH. STORES
SOUTH C.B. BLDG. & HOPPERS
FIELD LAB
NORTH CB BLDG.
NOTE 5
P.E. LAB
SOUTH RUBBER FINES
NORTH RUBBER FINES
TECHNICAL BLDG & LAB
API SEPARATOR
CLEANING BLDG
C.B. SHOWER ROOM
"D" PROCESS BLDG
SOUTH PROCESS WAREHOUSE
"C" PROCESS BLDG
"CC" PROCESS BLDG
SBR LAB
CB LAB
BANBURY PROCESS BLDG
"B" PROCESS BLDG
NORTH PROCESS WAREHOUSE
"A" PROCESS BLDG
MATERIALS FLOW BLDG.
STYRENE VENT
"D" STORAGE BLDG
"C" STORAGE BLDG
"CC" STORAGE BLDG
BANBURY STORAGE BLDG
"B" STORAGE BLDG
"A" STORAGE BLDG
PARKING LOT
CONTRACTOR'S GATE
SARAH JANE ROAD
DESIGN ENGINEERING BLDG
CONTRACTOR'S LOCKER ROOM BUILDING
SEWAGE TREATMENT PLANT
FLARE STACK
FLARE STACK ROAD
EAST LOOP ROAD
EAST GATE GUARD BLDG
NOTE 6&7
SEPARATOR
STATE HIGHWAY 136
"RUBBER PLANT ROAD"



DETAIL "A"

LEGEND

CLASS I DIVISION I GROUP B&D (EXCEPT AS NOTED)

CLASS I DIVISION II GROUP B&D

NOTES

1. A 15 FOOT RADIUS, 8 FEET IN HEIGHT, AROUND THE DRAIN VALVE ON THE BD SURGE TANK IS CLASSIFIED: CLASS I DIVISION I GROUP B.
2. A 15 FOOT RADIUS AROUND THE DRAIN VALVE ON THE BD RECEIVER, SECOND FLOOR ONLY TO A HEIGHT OF 8 FEET IS CLASSIFIED: CLASS I DIV I GROUP B.
3. THE REFRIGERATION ANNEX TO BD BELOW THE GRATING AND ALL SUMPS AND PITS ARE CLASSIFIED: CLASS I DIVISION I GROUP B&D. THE AREA ABOVE THE GRATING IS DIVISION II.
4. [illegible]K FARM DIKED AREAS TO THE TOP OF THE DIKE WALL ARE CLASSIFIED: CLASS I DIVISION I GROUP B&D. ABOVE THE DIKE WALL IS DIVISION II.
5. CARBON BLACK CONVEYOR TRENCHES ARE CLASSIFIED: CLASS II DIVISION II GROUP F.
6. ALL PITS, MAJOR DEPRESSIONS, SUMPS, AND BASEMENTS CONNECTING TO CLASSIFIED HAZARDOUS AREAS ARE TO BE CONSIDERED AS CLASS I DIVISION I.
7. OPEN PITS, SUMPS AND TRENCHES CLASSIFIED AS CLASS I DIV I GROUP B&D SHALL HAVE A DIVISION II AREA LOCATED ABOVE THE OPEN AREA. (SEE DET. "A").
8. FUEL DISPENSING STATIONS ARE TO BE CLASSIFIED CLASS I DIVISION I.

REVISION
(A) ISSUED 6-19-1987 WDB
(B) REVISED REACTOR BLDGS 8A/8B FROM CL. I DIV I TO CL. I DIV II. 11-4-89 CAS
(C) RELOCATED NOTE 8. 1-23-89 CAS
(D) REVISED RECOVERY BLDG'S "A" & "B" AND EAST TRANSFER PUMP HOUSE FROM DIV. I TO DIV. II 10-9-89 CAS

[REF]ERENCE DRAWINGS
P&P 983-V 501
BFG PN -311 &G-2850
SYNPOL [illegible]-A-31 501-B-200

Drawn By WDB Traced By WDB Checked By
Date 11-14-86 Date 6-12-87 Date
Scale 1"=100'-0"

DEPT. BLDG. FLR.
APPROVED
DATE

PLANT MAP
HAZA[R]DOUS AREA LOCATIONS

AMERIPOL SYNPOL COMPANY
PORT NECHES SBR PLANT
PORT NECHES, TEXAS

DJ No.
G.P.O./A.R. No.

F-3142-005 REV. D